National Energy Board | Office national de l'énergie

# Compendium of Decisions

**MH-1-99**

**Saskatchewan and Eastern and Central Alberta**

**and**

**MH-2-99**

**Northwestern Alberta and Northeastern British Columbia**

**Alliance Pipeline Project**

**Detailed Route Hearings**

101-04387/

National Energy Board

# Compendium of Decisions

In the Matter of

## Alliance Pipeline Ltd. on behalf of the Alliance Pipeline Limited Partnership

## Alliance Pipeline Project

Application dated 18 December 1998 for approval of the Plans, Profiles and Books of Reference respecting the detailed route of the Alliance Pipeline Project, consisting of a mainline pipeline and lateral pipelines, plus related facilities, from Gordondale, Alberta to a point on the Canada/United States border near Elmore, Saskatchewan.

## MH-1-99 and MH-2-99

**September 1999**

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Cat. No. NE23-90/2000E
ISBN 0-662-29482-3

This report is published separately in both official languages.

**Copies are available on request from:**
Publications Coordinator
National Energy Board
444 Seventh Avenue S.W.
Calgary, Alberta, T2P 0X8
E-Mail: publications@neb.gc.ca
Facsimile: (403) 292-5576
Telephone: (403) 299-3562
1-800-899-1265

**For pick-up at the NEB office:**
Library
Ground Floor

Printed in Canada

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N° de cat. NE23-90/2000F
ISBN 0-662-85152-8

Ce rapport est publié séparément dans les deux langues officielles.

**Exemplaires disponibles sur demande auprès du:**
Coordonnatrice des publications
Office national de l'énergie
444, Septième Avenue S.-O.
Calgary (Alberta), T2P 0X8
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Bibliothèque
Rez-de-chaussée

Imprimé au Canada

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## Recital and Appearances

IN THE MATTER OF the *National Energy Board Act* and the Regulations made thereunder; and

IN THE MATTER OF an application by Alliance Pipeline Ltd. dated 3 July 1997 and subsequent Certificate of Public Convenience and Necessity GC-98 issued 3 December 1998, authorizing construction and operation of the Alliance Pipeline Project in Canada, following a 77-day public hearing and a comprehensive study on potential environmental effects; and

IN THE MATTER OF Reasons for Decision dated November 1998 in which the Board approved the general route of the pipeline; and

IN THE MATTER OF the National Energy Board Hearing Order MH-1-99.

HEARD in Regina, Saskatchewan on 12, 13, 14 and 15 April, and Edmonton, Alberta on 27, 29 and 30 April 1999.

BEFORE:

| | |
|---|---|
| R.J. Harrison | Presiding Member |
| D. Valiela | Member |
| J.S. Bulger | Member |

APPEARANCES:

| | |
|---|---|
| R. Neufeld | Alliance Pipeline Ltd. |
| A. Ross | |
| Paul Vincent Dyke | |
| Alex & Mary Banga | |
| John Irving | |
| Linda Irving | |
| John M. Irving | |
| James Irving | |
| Joel Irving | |
| Katherine Murphy O'Flynn | |
| Wilfred Brandt (tenant) | |
| Mr. Orest Rusnak | Vernon Tymkow |
| Mr. Richard Secord | Margaret Cook |
| C. Beauchemin | Board counsel |
| P. Enderwick | |

## Recital and Appearances

IN THE MATTER OF the *National Energy Board Act* and the Regulations made thereunder; and

IN THE MATTER OF an application by Alliance Pipeline Ltd. dated 3 July 1997 and subsequent Certificate of Public Convenience and Necessity GC-98 issued 3 December 1998, authorizing construction and operation of the Alliance Pipeline Project in Canada, following a 77-day public hearing and a comprehensive study on potential environmental effects; and

IN THE MATTER OF Reasons for Decision dated November 1998 in which the Board approved the general route of the pipeline; and

IN THE MATTER Or the National Energy Board Hearing Order MH-2-99.

HEARD in Grande Prairie, Alberta on 31 May, and 1 & 2 June 1999.

BEFORE:

| | |
|---|---|
| R. Harrison | Presiding Member |
| J.S. Bulger | Member |
| J-P. Théorêt | Member |

APPEARANCES:

| | |
|---|---|
| R. Neufeld | Alliance Pipeline Ltd. |
| A. Ross | |
| | |
| J. Darryl Carter, Q.C. | Lloyd & Katherine Olley |
| | Dale & Gwen Smith |
| | Don & Linda Liland |
| | Franklin & Joan Moller |
| | Brian & Teresa Fast |
| | Peter & Levke Eggers |
| | Bryan Ellingson |
| C. Beauchemin | Board counsel |
| P. Enderwick | |

**The Approved Alliance Pipeline System (General Route)**

## Chapter 1

# Introduction

On 3 December 1998, the National Energy Board (the Board) issued a certificate of public convenience and necessity approving the construction and operation of the Alliance Pipeline Project in Canada. This followed a 77-day public hearing and a comprehensive study on potential environmental effects. The Board also approved the general route of the pipeline at that time.

Alliance Pipeline Ltd. (Alliance) subsequently applied to the Board for approval of plans showing the proposed detailed route of the pipeline in Canada. As required by section 34 of the *National Energy Board Act* (the NEB Act), Alliance served notices on owners of lands proposed to be acquired and published notices in the areas in which the lands are situated. Landowners and other interested persons opposing the detailed routing of the Alliance Pipeline Project were given 30 days in which to file a written statement of opposition with the Board.

Out of 3 045 landowners affected by the project in Canada, the Board received 48 written statements of opposition to the detailed route. These resulted in 15 oral hearings.

As prescribed by section 36 of the NEB Act, the issues for the detailed route hearings were limited to (i) the best possible detailed route of the pipeline and (ii) the most appropriate methods and timing of constructing the pipeline. The Board did not reconsider the issues that had been addressed during the certificate hearing, such as the need for the pipeline and its general route. Compensation for land use was also outside the scope of the detailed route hearings.

## 1.1 Hearing Order MH-1-99

The Board issued Letter Decisions for six landowners:

Alex and Mary Banga;
Paul Vincent Dyke;
John & Linda Irving;
Katherine Murphy O'Flynn;
Vernon Tymkow; and
Margaret Cook.

The Board denied Alliance's applied-for detailed route in the case of Mr. Tymkow and approved the applied-for route in the other cases listed above. Alliance re-applied for a detailed route that was acceptable to Mr. Tymkow, which was subsequently approved by the Board.

A hearing was also held into the objection of Mr. and Mrs. Elliott in Regina, Saskatchewan. The Board reserved its decision in this case pending the filing of additional information. However, Alliance subsequently withdrew that application and applied for a detailed route which bypassed this tract of land. No objection was filed for this new route and it was subsequently approved by the Board.

Of the remaining objections included in Hearing Order MH-1-99, one was settled just prior to the landowner's hearing, one was withdrawn soon after the hearing, and the remaining objections were resolved prior to the scheduled hearings.

## 1.2 Hearing Order MH-2-99

The Board issued Letter Decisions for seven landowners:

Lloyd & Katherine Olley;
Dale & Gwen Smith;
Don & Linda Liland;
Franklin & Joan Moller;
Brian & Teresa Fast;
Peter & Levke Eggers; and
Bryan Ellingson.

The Board denied Alliance's applied-for detailed route in the cases of Mr. and Mrs. Liland and Mr. and Mrs. Moller, and approved the applied-for detailed route in the other cases listed above. Alliance re-applied for detailed routes that were acceptable to the Lilands and the Mollers, which were subsequently approved by the Board.

The remaining objections included in Hearing Order MH-2-99 were resolved prior to the scheduled hearings.

## 1.3 Summary

| Hearing Order | Areas Covered | Number of Objections Filed | Number of Objections Settled Prior to Hearing | Number of Objections that Resulted in Hearings |
|---|---|---|---|---|
| MH-1-99 | Saskatchewan, and eastern and central Alberta | 21 | 13 | 8 |
| MH-2-99 | northwestern Alberta and northeastern British Columbia | 17 | 10 | 7 |
| | various | 10 | 10 | 0 |
| **Total** | | **48** | **33** | **15** |

The following is a compendium of the decisions made by the Board.

## Chapter 2

# MH-1-99

## 2.1 Decision on Route Objection by Alex and Mary Banga Heard by the Board on 13 April 1999 in Regina, Saskatchewan

### 2.1.1 Introduction and Background

On 3 December 1998, the National Energy Board ("Board") issued a certificate of public convenience and necessity approving the construction and operation of the Alliance Pipeline Project in Canada. This followed a 77-day public hearing and a comprehensive study on potential environmental effects. The Board also approved the general route of the pipeline at that time.

Alliance Pipeline Ltd. ("Alliance") subsequently applied to the Board for approval of plans showing the proposed detailed route of the pipeline in Canada. As required by section 34 of the *National Energy Board Act* ("*NEB Act*"), Alliance served notices on owners of lands proposed to be acquired and published notices in publications serving the areas in which the lands are situated. Landowners and other interested persons opposing the detailed routing of the Alliance Pipeline were given 30 days in which to file a written statement of opposition with the Board.

The Board is conducting public hearings in response to the route objections. As prescribed by section 36 of the *NEB Act*, the issues for the detailed route hearings are limited to (i) the best possible detailed route of the pipeline and (ii) the most appropriate methods and timing of constructing the pipeline. The Board is not reconsidering the issues that were addressed during the certificate hearing, such as the need for the pipeline and its general route. Compensation for land use is also outside the scope of the detailed route hearings.

This decision pertains to the statement of opposition that was filed by Alex and Mary Banga of Regina, Saskatchewan on 8 January 1999. The hearing into the Bangas' objection was held on 13 April 1999 in Regina, Saskatchewan, with Mr. Banga and Alliance participating.[1]

Alliance plans to construct and operate the Canadian portion of a natural gas pipeline system from northeastern British Columbia and northwestern Alberta, across Saskatchewan, to the midwest United States. The Canadian portion of the system will consist of approximately 2300 kilometres ("km") of pipeline ranging up to 1067 millimetres ("mm") in diameter and other facilities including seven mainline compressor stations. Construction of the Estlin Compressor Station, in the vicinity of the Bangas' land, is scheduled to begin in the summer of 1999 and the pipeline is scheduled to be in service in the second half of 2000.

---

[1] The hearing record includes a map showing the Bangas' land in relation to Alliance's proposed detailed route and proposed Estlin Compressor Station site, as well as two alternate station sites suggested by the Bangas (Exhibit B-40).

### 2.1.2 Proposed Detailed Route

The route proposed by Alliance would cross the Bangas' land, identified as S½ 20 & SE 10-15-18 W2M, between approximately kilometre posts ("KP") 1398.5 & 1400.4 and KP 1403.9 & 1405 respectively. The proposed route would follow a southeastern alignment as it approaches and crosses seven wetland areas and nine gravel roads. Alliance currently proposes to locate the Estlin Compressor Station on land identified as SW 15-15-18 W2M, which is not owned by the Bangas and is approximately 1 km from SE 10-15-18 W2M, the closest Banga-owned property.

### 2.1.3 Routing Rationale

Alliance stated that the selection of compressor station sites requires the balancing of hydraulic design with environmental and land use considerations. The location initially proposed for the Estlin Compressor Station was in NE 19-15-18 W2M. At the time of the certificate hearing, the Bangas objected to this location due to its proximity to their property on the S½ of Section 20, where they had originally proposed to build a house. Specifically, the Bangas requested that the compressor station location be moved further to the east.

Subsequent to the certificate hearing, Alliance determined that it could move the Estlin Compressor Station to the east, to the currently proposed site.

### 2.1.4 Nature of Objection

The Bangas' objection was based on (i) safety concerns, (ii) the proposed location of the Estlin Compression Station and related noise impacts, and (iii) the impact the proposed route would have on the Estlin East and Banga/Gooding/Murphy Drainage Projects.

### 2.1.5 Alternate Routing and Alternate Compressor Station Sites

The Bangas did not propose any change to the alignment of the pipeline in the vicinity of their lands. They expressed continuing concerns, however, about the siting of the Estlin Compressor Station.

The Bangas proposed NE 2-15-18 W2M ("Site 2"), adjacent to the existing Cochin Pump Station, or SW 31-14-17 W2M ("Site 3") as alternate sites for the Estlin Compressor Station. Alliance indicated that it is unable to move the Estlin Compressor Station to either Site 2 or Site 3 due to hydraulic design constraints (see "Engineering and Safety Matters"). Alliance also discussed two other sites that it evaluated in order to provide background information on the site selection process.

### 2.1.6 Environment Matters

*General*

Alliance described the land in the vicinity of Site 2, Site 3, and the currently proposed site as being very level agricultural farmland, almost entirely under crop production and interspersed with wetlands of various sizes. The wetlands have formed in low-lying depressions, with very poor drainage, which collect and hold water for much of the year, varying with climatic conditions. With the exception of wetlands and at old homesteads, Alliance stated that very little natural vegetation exists in the area.

Alliance submitted that the currently proposed site and the two alternate sites were positioned on lands with similar environmental conditions. All three were sited on fields under cultivation, on similar soils, and in similar proximity to large wetlands that could provide wildlife habitat or nesting habitat for migratory birds such as geese and waterfowl.

*Rare Species*

During its wildlife surveys, Alliance recorded two bird species of special status in the vicinity of the currently proposed site, identified as Franklin's gull and Canada goose. Alliance confirmed that the loggerhead shrike, reported along the location of the proposed power line, was located 3.2 km from its proposed pipeline alignment. Alliance indicated that it had undertaken general wildlife surveys in the vicinity of Sites 2 and 3, but that no specific surveys were conducted for those sites.

Alliance submitted that construction of the compressor station at the currently proposed site would not adversely affect these species. Alliance stated that the observation of Franklin's gulls was incidental and that this species was not recorded as nesting near the currently proposed site. As such, no setback distance or timing restriction for construction would be required by Saskatchewan Environment and Resource Management. Alliance stated that the Canada goose was recognized by the province as a managed species, but that no specific timing or setback restrictions would be required.

Alliance submitted that noise disturbance associated with the operation of the compressor station could displace nesting, but that, due to the abundance of similar wetland habitat in the local area, it would not adversely affect these species.

*Estlin East Drainage Project*

Mr. Banga expressed concern with respect to a potential conflict between the proposed municipal Estlin East and Banga/Gooding/Murphy Drainage Projects and the Alliance Pipeline, which would cross the alignments of several future drainage ditches. Mr. Banga indicated that the projects have been in the planning stages since the 1980s and will most likely be built at some time in the future. Specifically, Mr. Banga raised the issue of the Estlin East Drainage Project's main ditch, which would run along the south boundary of the property limits of the currently proposed site and would be 2 to 3 m deep. Alliance committed to granting the project proponents permission to construct the main ditch across its land and to lower the pipe elevation to accommodate the 2 to 3 m ditch depth. Alliance also committed to making the appropriate adjustment to the depth of burial of the pipeline where there is a planned drainage project, to a minimum of 1.5 m below an unlined drainage channel.

***Views of the Board***

The Board notes the similarity in land use, soils, and local abundance of wetlands in the vicinity of the currently proposed site and the two alternate compressor station sites. The Board recognizes the sensitivity of breeding sites for species listed by either provincial or federal agencies. The Board is of the view that, in the absence of confirmed nesting of a significant species at or near any of the three locations, the sites are similar from an environmental point of view.

The Board is of the view that the presence of the Alliance Pipeline would not restrict the future development or efficiency of the Estlin East or Banga/Gooding/Murphy Drainage Projects. The Board notes that paragraph 46(1)(b) of the *NEB Act* gives the Board the power to direct a company to divert or relocate its pipeline if the Board is of the opinion that the diversion or relocation is required to prevent or remove an interference with a drainage system.

### 2.1.7 Engineering and Safety Matters

Mr. Banga raised concerns regarding (i) the siting of the proposed Estlin Compressor Station, (ii) the safety implications of the Cochin and Alliance Pipelines paralleling each other, and (iii) the registration of Alliance's engineers to practice in Saskatchewan.

Mr. Banga stated that his primary reason for wanting the Estlin Compressor Station moved was the proximity to his proposed residence. Mr. Banga noted that his concerns related to noise levels, air emissions, and safety, since the highest number of reported incidents are related to compressor stations. During the hearing, Mr. Banga indicated that the proposed location of his residence had shifted and would now be approximately 4 km from the currently proposed site for the compressor station. Alliance observed that, subsequent to the certificate hearing, it had moved the Estlin Compressor Station east of the site proposed during the certificate hearing. Mr. Banga indicated that this location, being further removed from his proposed residence, was more agreeable to him than the site proposed during the certificate hearing. Alliance submitted that, in its view, all of its stations would be an appropriate distance from residences and that there would be a greater distance between residences and the Estlin Compressor Station than at any of the other stations.

Alliance submitted that the currently proposed site has already been moved downstream of the hydraulic optimum and that further movement of the station to Sites 2 or 3, as suggested by Mr. Banga, would result in the pipeline being less efficient. More particularly, moving the compressor station to either of these sites would further reduce the volume of gas that could be transported and would require additional fuel gas to power the compressor. Alliance acknowledged that the sites proposed by Mr. Banga could be used if larger compressor units with additional horsepower were installed. However, Alliance submitted that this would result in a significantly increased capital cost, and that the compressors have been ordered and manufacturing is underway.

Alliance argued that, all things considered, the currently proposed site for the Estlin Compressor Station is the best possible location. Alliance noted that the site has excellent access and has no construction issues associated with it, and that an agreement has been entered into with the owner of that land.

Mr. Banga also raised a concern with respect to the impact that a failure of the Cochin Pipeline might have on the Alliance Pipeline. Alliance responded that the lateral spacing of 24 m between the two pipelines is such that, in its view, there would be no impact. In this connection, Alliance stated that there is published evidence which implies that a spacing of 9 m between two large gas pipelines is sufficient to prevent any impact from one on the other. Alliance went on to note that the Cochin Pipeline is not a large gas line.

In his objection, Mr. Banga submitted that having qualified and properly registered engineers engaged in the design and construction of the Alliance Pipeline would significantly address his concerns about

pipeline safety. Mr. Banga submitted that, until he had raised the issue about registration of the engineers working on the Alliance Pipeline Project, there were only one or two engineers, working on the Alliance Project, who were registered and licensed to practice in the Province of Saskatchewan. He further noted his desire to address the issue of the registration of the engineers who performed the design of the pipeline.

Alliance clarified that it did not want to imply that the only people who have worked on the design and engineering for the Alliance Pipeline are those who are registered in Saskatchewan. It was noted that the international experts who contributed to the fracture control design clearly did not fall within that category. Although as a federal undertaking Alliance does not view registration as mandatory, it submitted that, with respect to its management and operation, it intends to voluntarily comply with the registration requirements for engineering professionals under The Engineering and Geosciences Professions Act of Saskatchewan. Alliance further submitted that it will require its consultants to do likewise.

***Views of the Board***

The Board notes that there would be a greater distance between residences and the Estlin Compressor Station than at any of the other station locations along the pipeline route. The Board also notes that Mr. Banga indicated that this location, being further removed from his proposed residence, was more agreeable to him than the site proposed during the certificate hearing. The Board is satisfied that the Estlin Compressor Station would be an appropriate distance from the proposed Banga residence.

The Board notes that Alliance has taken steps to register its engineers with the Association of Professional Engineers and Geologists of Saskatchewan.

The general design and safety of the Alliance Pipeline were addressed during the certificate hearing.

### 2.1.8 Other Matters

*Liability / Insurance*

Mr. Banga raised a concern with respect to compensation to landowners in the event of personal injury or death resulting from a pipeline failure. Mr. Banga indicated that, in his view, when Alliance enters into an easement agreement, there should also be a signed agreement between a landowner and the company, prior to the commencement of construction, that would indicate what the payout would be if a landowner were injured or there were a loss of life.

Alliance indicated that it carries third-party liability of up to $200 million to cover compensation in the event of a pipeline failure.

*Views of the Board*

The Board notes the concern expressed regarding compensation in respect of a pipeline failure. The Board is not, however, persuaded that it would be appropriate to require agreement between a landowner and Alliance indicating what the future payout would be in the event of an injury or loss of life. The Board notes that Alliance does have liability insurance to cover the event of a failure.

**Decision**

**The Board is satisfied with Alliance's proposed site for the Estlin Compressor Station. As a matter of clarification, the Board notes that the definition of "pipeline" in the *NEB Act* includes compressor stations and other surface facilities, and that the siting of such facilities is within the scope of the detailed route hearing process.[1]**

**Having considered all of the environmental, engineering and safety, and other matters described above, the Board finds, on balance, that the route proposed by Alliance is the best possible route for the pipeline in this case and finds that Alliance has committed to the most appropriate methods and timing of construction.**

**Any approval by the Board of plans, profiles, and books of reference for the subject lands will include a condition requiring Alliance to fulfill all of the commitments made by the Company in the course of this detailed route proceeding. Mr. and Mrs. Banga are entitled to seek a remedy from the Board if any of the commitments are not being fulfilled.**

**If a commitment cannot be fulfilled at any time, Alliance will be required to provide to the Board, and to Mr. and Mrs. Banga, a written explanation together with a description of the measures that the Company proposes to otherwise take to address the Bangas' concerns. If dissatisfied with the explanation and/or the alternate measures being proposed, Mr. and Mrs. Banga may file a complaint with the Board and seek an appropriate remedy.**

| R.J. Harrison | D. Valiela | J.S. Bulger |
|---|---|---|
| Presiding Member | Member | Member |

Calgary, Alberta
Dated 5 May 1999

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[1] Under the *NEB Act*, "pipeline" means "*a line that is used or to be used for the transmission of oil, gas or any other commodity ... and includes all branches, extensions, tanks, reservoirs, storage facilities, pumps, racks, compressors, loading facilities, interstation systems of communication by telephone, telegraph or radio and real and personal property and works connected therewith ...*" (underlining added for emphasis).

## 2.2 Decision on Route Objection by Mr. Paul Vincent Dyke Heard by the Board on 12 April 1999 in Regina, Saskatchewan

### 2.2.1 Introduction and Background

On 3 December 1998, the National Energy Board ("Board") issued a certificate of public convenience and necessity approving the construction and operation of the Alliance Pipeline Project in Canada. This followed a 77-day public hearing and a comprehensive study on potential environmental effects. The Board also approved the general route of the pipeline at that time.

Alliance Pipeline Ltd. ("Alliance") subsequently applied to the Board for approval of plans showing the proposed detailed route of the pipeline in Canada. As required by section 34 of the *National Energy Board Act* ("*NEB Act*"), Alliance served notices on owners of lands proposed to be acquired and published notices in publications serving the areas in which the lands are situated. Landowners and other interested persons opposing the detailed routing of the Alliance Pipeline were given 30 days in which to file a written statement of opposition with the Board.

The Board is conducting public hearings in response to the route objections. As prescribed by section 36 of the *NEB Act*, the issues for the detailed route hearings are limited to (i) the best possible detailed route of the pipeline and (ii) the most appropriate methods and timing of constructing the pipeline. The Board is not reconsidering the issues that were addressed during the certificate hearing, such as the need for the pipeline and its general route. Compensation for land use is also outside the scope of the detailed route hearings.

This decision pertains to the statement of opposition that was filed by Mr. Paul Vincent Dyke of Rosetown, Saskatchewan on 7 January 1999. The hearing into Mr. Dyke's objection was held on 12 April 1999 in Regina, Saskatchewan, with Mr. Dyke and Alliance participating.[1]

Alliance plans to construct and operate the Canadian portion of a natural gas pipeline system from northeastern British Columbia and northwestern Alberta, across Saskatchewan, to the midwest United States. The Canadian portion of the system will consist of approximately 2300 kilometres ("km") of pipeline ranging up to 1067 millimetres ("mm") in diameter and other facilities including seven mainline compressor stations. Construction across Mr. Dyke's land is scheduled to begin in the summer of 2000 and the pipeline is scheduled to be in service in the second half of that year.

### 2.2.2 Proposed Detailed Route

The route proposed by Alliance would cross Mr. Dyke's land, identified as E½ 18-30-14 W3M, between approximately kilometre posts ("KP") 1106.3 and 1107.7. The proposed route would follow a southeastern alignment as it approaches and crosses two Canadian Pacific Railway rights-of-way, Highway No. 4, three gravel roads, Highway No. 7, and a Canadian National Railway right-of-way. The proposed route also traverses areas identified as wet terrain.

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[1] The hearing record includes a map showing Mr. Dyke's land in relation to Alliance's proposed detailed route and two alternates suggested by Mr. Dyke (Exhibit B-26).

### 2.2.3 Routing Rationale

In eastern Alberta and Saskatchewan, the proposed Alliance Pipeline route generally parallels the existing Cochin Pipeline. Alliance stated that since (i) the Cochin route had originally been aligned to accommodate a second right-of-way on its northern boundary, (ii) the Cochin Pipeline connects to the same general location as the Alliance Pipeline, and (iii) the Cochin Pipeline follows a relatively straight line between its connection points, paralleling the existing Cochin Pipeline generally permitted Alliance to minimize the overall right-of-way length while respecting other routing criteria. However, where particular land use, environmental, or engineering constraints occur, Alliance assessed other alignments in order to determine the most appropriate route in the specific circumstance.

Alliance identified that constraints in this particular area included (i) the Town of Rosetown, located to the south of the proposed routing, (ii) an airstrip located at the south half of Section 16, and (iii) a proposed grain terminal to be constructed by the Saskatchewan Wheat Pool on lands within N½ 17-30-40 W3M, specifically acquired for that purpose.

### 2.2.4 Nature of Objection

Mr. Dyke's objection was based on the perceived impact the proposed diagonal route across his property would have on (i) his safety and that of his tenant, especially given Alliance's proposed operating pressure of 12 000 kilopascals (1,740 pounds per square inch), (ii) anticipated future irrigation projects, (iii) the potential establishment of weeds, and (iv) the location of a potential grain terminal site.

### 2.2.5 Alternate Routes

Mr. Dyke indicated that, should the Alliance Pipeline cross his property, pursuant to section 75 of the *NEB Act*, it should be constructed in such a way as to minimize damage to his land by following his northern property boundary. Mr. Dyke proposed two alternate routes. The first alternate route would depart from the proposed Alliance route at approximately KP 1103.9 and follow an easterly route for approximately 2.35 km crossing a gravel road and two wet areas. The route would then head in a southerly direction for approximately 700 metres ("m") and then take an easterly direction again for approximately 850 m, avoiding Mr. Dyke's property. Finally, the route would take a southerly direction for approximately 750 m before re-joining the Alliance route at approximately KP 1107.4.

The second alternate route would depart from the proposed Alliance route at approximately KP 1103.9 and follow a southeasterly route for approximately 3.25 km, crossing a gravel road and the tip of a wet area, and avoiding Mr. Dyke's property. The route would then take a southerly direction for approximately 750 m before re-joining the Alliance route near KP 1107.4.

With respect to the first alternate route, Mr. Dyke indicated that, if his northern neighbour did not want the pipeline to cross that property, Mr. Dyke would be prepared to have Alliance cross the northern boundary of his property. Alliance had not spoken with the landowners along Mr. Dyke's alternate routes to see if they would be agreeable. The first alternate route contains a number of 90 degree bends. Although the bends would require additional work room, Alliance indicated that the bends would not be considered a routing constraint, as these could be rounded out.

Alliance submitted that the additional cost of the first alternate would be approximately $1.1 million and that the additional cost of the second alternate would be approximately $0.5 million.

The area in the vicinity of Mr. Dyke's property is primarily cultivated land with little to no natural vegetation remaining. Alliance stated that, based on soils, land use, and environmental issues, the two proposed alternate routes were not significantly better or worse than the proposed route. Alliance also stated that, although no specific constraints were associated with the two alternate routes, both would require additional length and additional temporary work space compared to the proposed route.

### 2.2.6 Environmental Matters and Agricultural Practices

*General*

Mr. Dyke's property is farmed by a tenant who produces primarily grain crops as well as peas and beans. The land is gently sloping with Regina Clay soils and 10-15 centimetres of topsoil. Mr. Dyke stated that the most productive portion of the property is in the vicinity of the existing Cochin easement and the proposed Alliance easement, while the least productive is in the northeast corner.

Alliance stated that the construction area would include both the 18 m permanent easement and the 14 m wide temporary work space. Alliance estimated that construction on Mr. Dyke's property would require six to eight weeks starting in early June 2000, with clean-up most likely occurring in early August 2000. Alliance indicated that reclamation measures on the right-of-way should be completed so that seeding could commence as usual, in the spring following construction.

Mr. Dyke expressed concern regarding (i) fragmentation of fields by pipeline easements, (ii) wind erosion, (iii) the depth of cover over a pipeline, as it may limit the depth of cultivation that he or his tenant would be able to carry out, and (iv) the increased potential for additional pipelines in the future if the Alliance Pipeline were added to the existing pipelines on his land. Alliance submitted that, if the Alliance Pipeline were placed adjacent to the Cochin Pipeline, Mr. Dyke's tenant could farm over the top of the Alliance Pipeline without any adverse effect.

*Irrigation and Farming Practices*

Mr. Dyke stated that, although there was existing irrigation infrastructure in the northeast corner of the southeast quarter of Section 18, none existed in the vicinity of the proposed route. However, Mr. Dyke expressed concern that the pipeline may affect the development of future irrigation facilities that may be required to produce crops such as special peas or sunflowers. Alliance stated that, should different tillage or irrigation practices be contemplated, it would develop, in consultation with Mr. Dyke and his tenant, specific measures to ensure that those operations would not be impeded.

*Topsoil Handling and Reclamation*

Alliance stated that the greatest environmental concern associated with the crossing of Mr. Dyke's property is the risk of rutting and compaction due to the nature of the clay soils. Alliance submitted that no loss of soil productivity should occur, under good conditions, if topsoil stripping is undertaken. During construction, Alliance proposes to strip topsoil from the trench and spoil area, but not the work or travel lane areas. Alliance stated that it would consider stripping the full construction right-of-way at the

request of the landowner or for some other reason, such as wet weather conditions. Alliance stated that it has a Wet Soil Contingency Plan in its Environmental Plans which includes work shutdown criteria during wet conditions.

*Wetlands/Native Prairie/Rare Plants*

Several small wetland areas are located on Mr. Dyke's property and the northwest quarter of Section 17, to the east. Alliance described these wetlands as seasonally flooded areas with poor drainage and a history of cropping. Alliance submitted that it would not be a reasonable routing criterion to avoid such small wetlands given their abundance on the Prairies and because pipeline companies have in the past constructed across such areas with minimal problems.

*Wind Erosion*

Mr. Dyke expressed concern regarding wind erosion and subsequent soil loss when soil is exposed, such as he has observed after cultivation and prior to crop growth. Alliance has identified Mr. Dyke's property as being susceptible to wind erosion on its Environmental Alignment Sheets. Accordingly, Alliance indicated that it would work with Mr. Dyke to discuss measures, such as the use of tackifiers, to ensure that topsoil and subsoil would not be lost due to wind erosion. Further, Alliance stated that it has a Wind Erosion Contingency Plan in its Environmental Plans.

*Weeds*

Based on his previous experience with the Cochin Pipeline, Mr. Dyke expressed concern regarding weed growth on the Alliance easement following construction. Alliance outlined in its Environmental Plans specific mitigation measures to prevent weed infestation and control growth of noxious or restricted weeds.

***Views of the Board***

The Board notes that the land surrounding Mr. Dyke's property is predominantly agricultural and is of the view that the environmental issues and agricultural practices are similar on the Alliance proposed route and the alternate routes suggested by Mr. Dyke.

The Board is of the view that the mitigative and reclamation measures described by Alliance in its Environmental Plans, and during this proceeding, would effectively ensure that adverse effects on agricultural productivity and future use of Mr. Dyke's land resulting from construction and operation of the proposed route would be minimal. The Board notes that disruption to farming activities would occur during construction, but that it would be short term and that, through Alliance's commitment to consult with Mr. Dyke and his tenant, it would be minimized.

The Board is of the view that the residual environmental effects, after mitigation, for the proposed route of Alliance would be similar to those that would be encountered on the alternate routes suggested by Mr. Dyke. However, the Board is of the view that the proposed detailed route of Alliance minimizes the length and area of land which would be disturbed by construction and operation and, hence, is preferable with respect to environmental matters.

### 2.2.7 Engineering and Safety Matters

Mr. Dyke was particularly concerned with the proposed operating pressure and the damage that would result from this pressure in the event of an explosion. Mr. Dyke noted a concern that he or his tenant could hit the pipeline when sampling for nitrates, which involves digging down 0.60 to 1.2 m (2 to 4 feet).

In response to Mr. Dyke's concerns regarding the safety of the Alliance Pipeline on his property, Alliance noted that it has addressed this issue by designing the pipeline to a Class 1 location and by using a depth of cover of 1.07 m (3.5 feet) in addition to the depth of the topsoil. Mr. Dyke indicated that he does not wish to conduct his farming operations over the Cochin Pipeline. However, Alliance observed that the current tenant appears to be farming over the pipeline and that, if the Alliance Pipeline were constructed next to the Cochin Pipeline, the tenant could farm over top of the Alliance Pipeline without any adverse effect.

***Views of the Board***

The general design and safety of the Alliance Pipeline were addressed during the Alliance certificate hearing.[1] As no site-specific issues regarding the design and safety of the pipeline were identified during the detailed route hearing for Mr. Dyke's objection, these matters will not be further addressed in this decision.

Any specific restrictions on activities on the right-of-way would be set out in any easement agreement, which, except in the case of a right of entry order, is a matter between Alliance and the landowner. Section 112 of the *NEB Act* and the *National Energy Board Pipeline Crossing Regulations* made under that section provide for a 30 m safety zone on either side of the right-of-way.[2] This legislation regulates certain activities in the vicinity of the pipeline which could pose a threat to safety.

Pursuant to subsection 4(1) of the *National Energy Board Pipeline Crossing Regulations, Part II*, Alliance will also be required to address, in its public awareness program, activities that could place the landowner or pipeline at risk, such as digging to sample for nitrates.

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1 Information on the engineering design of the pipeline can be found in Chapter 5 of the Board's Reasons for Decision for the Alliance Pipeline Project, dated November 1998.

2 Subsection 112(1) of the *NEB Act* states as follows: "*Subject to subsection (5), no person shall, unless leave is first obtained from the Board, construct a facility across, on, along or under a pipeline or excavate using power-operated equipment or explosives within thirty metres of a pipeline.*" The *National Energy Board Pipeline Crossing Regulations* were made under subsection (5) and govern in more detail excavation activities in the vicinity of a pipeline.

### 2.2.8 Other Matters

*Grain Terminal Location*

Alliance indicated that, although not proposed during the time of the initial routing of the pipeline, the grain terminal location is now something that would have to be considered in evaluating any alternate routes. Alliance indicated that it would consider the grain terminal to be a routing constraint of conflicting land use which would have to be resolved.

Alliance indicated that if it routed across the westerly end of the property proposed for the location of the grain terminal, the pipeline may not interfere with the construction of the grain terminal. Further, Alliance indicated that the grain terminal is in the early planning stages and that, according to the site plan filed as part of an undertaking, the position of the structures may not interfere with any possible re-routing of the pipeline.

*Tenant*

Mr. Dyke stated that he has a "non-transferrable" contract with a tenant who farms his property. Mr. Dyke further indicated that he could not sign an easement agreement with Alliance without the consent of the tenant. Alliance stated that it would require an easement from the owner as well as consent from the tenant before it could enter the lands to construct the pipeline. Alliance also confirmed that both the owner and the tenant were served with notices under paragraph 34(1)(a) of the *NEB Act*, allowing for objections to the pipeline route, and that the tenant did not object.

*Cochin Pipeline*

Mr. Dyke raised a number of concerns with respect to the Cochin Pipeline right-of-way that crosses his property. Specifically, Mr. Dyke commented on (i) expropriation, (ii) safety (pipeline pressure), (iii) weeds, and (iv) compensation. Mr. Dyke was concerned that Alliance could cause him similar problems to those he had experienced in the past with Cochin.

*Additional Pipelines*

Mr. Dyke indicated that presently he has two pipelines and one proposed pipeline affecting his property. He was concerned that the addition of the Alliance Pipeline could lead to the construction of even more pipelines across his land in the future.

*Location of Compressor Stations*

Mr. Dyke questioned Alliance on the proposed location of compressor stations in the vicinity of his property.

Alliance indicated that the present certificate from the Board provides for the nearest compressor station at approximately 60 km from his property. However, Alliance stated that, in the future, there may be a need for additional compression that could be located within approximately 1.6 km of his residence. If additional compression is proposed in the future, Alliance would be required to apply to the Board for approval at that time.

*Resolution of Issues*

Upon cross-examination by the Board, Alliance committed to sit down with Mr. Dyke and his tenant to discuss any farming practices that could be affected by the proposed pipeline construction. Alliance indicated that it would consider discussions with respect to the construction of the pipeline, specifically regarding irrigation plans that could require additional cover.

The Board further questioned Alliance as to the timing of those discussions in the absence of an easement agreement being signed. Alliance indicated that it was prepared to discuss the above-noted concerns. Alliance undertook to continue discussions with Mr. Dyke and provide reports to the Board about these discussions.

***Views of the Board***

The Board notes that Mr. Dyke's property, including the Cochin Pipeline right-of-way, is currently being farmed by a tenant. The Board further notes that, although the tenant was served a notice under paragraph 34(1)(a) of the *NEB Act*, he did not register an objection. The Board acknowledges Alliance's commitment to continue discussions with Mr. Dyke and his tenant and to report on these discussions. The Board is of the opinion that the construction of the proposed pipeline would be only a short-term interference with present farming practices.

The Board notes Mr. Dyke's concerns about his past experience with the Cochin Pipeline. Although those matters cannot be dealt with in this hearing, the Board encourages Mr. Dyke to contact the Board separately regarding any concerns he has with respect to any pipeline under the Board's jurisdiction.

The Board notes Mr. Dyke's concern with respect to additional pipelines crossing his property in the future. Although the mandate of this proceeding is limited to the detailed route of the proposed Alliance Pipeline, the Board notes that any new pipeline facilities under federal jurisdiction would require separate Board approval.

**Decision**

**Having considered all of the environmental, engineering and safety, and other matters described above, the Board finds, on balance, that the route proposed by Alliance is the best possible route for the pipeline in this case and finds that Alliance has committed to the most appropriate methods and timing of construction.**

**Any approval by the Board of plans, profiles, and books of reference for the subject lands will include a condition requiring Alliance to fulfill all of the commitments made by the Company in the course of this detailed route proceeding. Mr. Dyke and his tenant are entitled to seek a remedy from the Board if any of the commitments are not being fulfilled.**

**If a commitment cannot be fulfilled at any time, Alliance will be required to provide to the Board, and to Mr. Dyke and his tenant, a written explanation together with a**

**description of the measures that the Company proposes to otherwise take to address the concerns of Mr. Dyke and his tenant. If dissatisfied with the explanation and/or the alternate measures being proposed, Mr. Dyke or his tenant may file a complaint with the Board and seek an appropriate remedy.**

| R.J. Harrison | D. Valiela | J.S. Bulger |
|---|---|---|
| Presiding Member | Member | Member |

Calgary, Alberta
Dated 5 May 1999

## 2.3 Decision on Route Objection by John and Linda Irving Heard by the Board on 14 April 1999 in Regina, Saskatchewan

### 2.3.1 Introduction and Background

On 3 December 1998, the National Energy Board ("Board" or "NEB") issued a certificate of public convenience and necessity approving the construction and operation of the Alliance Pipeline Project in Canada. This followed a 77-day public hearing and a comprehensive study on potential environmental effects. The Board also approved the general route of the pipeline at that time.

Alliance Pipeline Ltd. ("Alliance") subsequently applied to the Board for approval of plans showing the proposed detailed route of the pipeline in Canada. As required by section 34 of the *National Energy Board Act* ("*NEB Act*"), Alliance served notices on owners of lands proposed to be acquired and published notices in publications serving the areas in which the lands are situated. Landowners and other interested persons opposing the detailed routing of the Alliance Pipeline were given 30 days in which to file a written statement of opposition with the Board.

The Board is conducting public hearings in response to the route objections. As prescribed by section 36 of the *NEB Act*, the issues for the detailed route hearings are limited to (i) the best possible detailed route of the pipeline and (ii) the most appropriate methods and timing of constructing the pipeline. The Board is not reconsidering the issues that were addressed during the certificate hearing, such as the need for the pipeline and its general route. Compensation for land use is also outside the scope of the detailed route hearings.

This decision pertains to the statement of opposition that was filed with the Board by John W. and Linda Irving on 14 January 1999. The hearing into the Irvings' objection was held on 14 April 1999 in Regina, Saskatchewan, with Mr. and Mrs. Irving, their sons (John M., James, and Joel), and Alliance participating.[1]

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[1] The hearing record includes maps showing the Irvings' land in relation to Alliance's proposed detailed route (reference Drawing No. AP-9950-2994, Revision 2, filed by Alliance as part of Exhibit B-11 as well as the maps filed by the Irvings as part of Exhibits C-5-1 and C-5-2).

Alliance plans to construct and operate the Canadian portion of a natural gas pipeline system from northeastern British Columbia and northwestern Alberta, across Saskatchewan, to the midwest United States. The Canadian portion of the system will consist of approximately 2300 kilometres ("km") of pipeline ranging up to 1067 millimetres ("mm") in diameter and other facilities including seven mainline compressor stations. Construction across the Irving land is scheduled to begin in the summer of 2000 and the pipeline is scheduled to be in service in the second half of that year.

### 2.3.2 Proposed Detailed Route

The proposed route would follow a southeasterly alignment as it approaches and crosses the Qu'Appelle River in southern Saskatchewan, while paralleling the existing Cochin Pipeline. The Irving family owns four quarter-sections of land to the east of the river valley that would be traversed by the proposed Alliance route. These lands are identified as SW 9 & W½ & SE 4-19-23 W2M and lie approximately between kilometre posts ("KP") 1336.7 and 1339.7. The route would also traverse a quarter-section of land leased by the Irvings, identified as NE 8-19-23 W2M.

On the Irvings' land, the proposed route would parallel the Cochin Pipeline and would intersect with the existing Enbridge (formerly Interprovincial Pipeline or IPL) pipeline corridor containing five parallel pipelines. The proposed route would traverse pasture, cultivated fields, wooded ravines, areas of bush, and three gravel roads, and would pass through the edge of an area marked as wet terrain.

### 2.3.3 Routing Rationale

In eastern Alberta and Saskatchewan, the proposed Alliance Pipeline route generally parallels the existing Cochin Pipeline. Alliance stated that as Cochin (i) had originally been aligned to accommodate a second right-of-way on its northern boundary, (ii) connects to the same general location as the Alliance Pipeline, and (iii) follows a relatively straight line between its connection points, paralleling the existing Cochin Pipeline generally permitted Alliance to minimize the overall right-of-way length while respecting other routing criteria. However, where particular land use, environmental, or engineering constraints were present, Alliance assessed other alignments in order to determine the most appropriate route in the specific circumstance.

At the inception of the route selection process, a decision was required as to whether to follow the existing rights-of-way of Cochin or Enbridge. Alliance indicated that it selected the Cochin route as it presented the most appropriate location for crossing the environmentally sensitive Qu'Appelle River valley. The proposed crossing would be more perpendicular than a crossing along the Enbridge route and, as such, would traverse less land in the valley and on the environmentally sensitive valley slopes. Paralleling the Cochin right-of-way would also result in less disturbance of natural vegetation than the Enbridge alternative.

### 2.3.4 Nature of Objection

The Irvings stated that their farm is a grain and cattle century family farm that they have owned and operated for over 30 years. The Enbridge corridor and the Cochin right-of-way intersect on the Irvings' land approximately 240 metres ("m") from their farmyard. As previously noted, the Irvings currently have five parallel Enbridge pipelines through their land (Table 2-1). The Irvings indicated that the first

of these pipelines was constructed across their land in 1950 with additional lines constructed in 1954, 1967, and 1994. The fifth and most recent Enbridge pipeline, which forms part of the Terrace Expansion, was constructed across the Irvings' land in 1998 with reclamation activities to continue into the summer of 1999. The Cochin Pipeline was constructed in 1977 and has a second undeveloped easement along its northern boundary. As previously noted, construction of the Alliance Pipeline parallel to the Cochin right-of-way is proposed for the summer of 2000.

**Table 2-1**
**Characteristics of Pipelines Through Irvings' Land**

| Company | Enbridge (formerly IPL) | | | | | Cochin | Alliance (proposed route) |
|---|---|---|---|---|---|---|---|
| Year Constructed | 1950 | 1954 | 1967 | 1994 | 1998 (Terrace) | 1977 | Proposed for 2000 |
| Diameter (inches) | 20 | 24 | 34 | 20 | 36 | 12 | 36 |
| Products Carried | natural gas liquids, synthetic and light crude oil | heavy crude oil | light and medium crude oil | refined products, synthetic crude oil | heavy crude oil | ethylene ethane propane | natural gas |

*Note: The entries in this table are based on evidence provided by the Irvings as well as information known to the Board as the regulator of the Enbridge, Cochin, and Alliance pipeline systems.*

The Irvings' objection was based on (i) safety concerns, (ii) the establishment of a pipeline "super highway" across their land consisting of the existing Enbridge corridor and the Cochin and Alliance rights-of-way, (iii) disturbance of the wooded ravines on the east side of the Qu'Appelle River valley, (iv) disturbance to their farming practices and operations, and (v) restrictions on the use of their land.

### 2.3.5 Alternate Routes

The Irvings indicated that they did not identify an alternate route as they stated they have limited knowledge of the principles involved in pipeline routing. They did, however, express a preference to have the pipeline as far away from their land as possible.

Alliance stated that, after the Irvings expressed concern regarding the alignment of the pipeline across their land, it evaluated reroutes that went around the land to the north and south. Alliance indicated that the proposed location of the crossing of the environmentally sensitive Qu'Appelle River valley was selected on the basis of numerous studies and functioned as a control point during the route selection process.

Alliance stated that a reroute to the north of the Irving land was not feasible as such a reroute would be very difficult, long, expensive, and more damaging to the Qu'Appelle River valley than traversing the Irvings' land.

Alliance indicated that, in determining a route to the south of the Irvings' land, the company recognized the constraints of the river valley, existing coulees, a tank farm on the northwest quarter of Section 5, and other existing pipelines in the area. Alliance stated that it evaluated such a conceptual route and determined that, fundamentally, this route and the proposed route would have similar environmental issues. Alliance submitted that differences associated with the southern route included the need to cross two small ravines as opposed to one large ravine, an increase in the length of native pasture crossed, and the need to cross two pivot irrigation systems in Section 5. Alliance indicated that the route to the south would be approximately 360 m longer than the proposed route and that both routes would have to cross the Enbridge corridor.

The Irvings indicated that they were not in a position to judge whether the route to the south would be a better route, particularly from an engineering or environmental perspective. However, they noted that this route would traverse another parcel of land owned by the family, and would be approximately 250 m from their residence. The Irvings also noted that such a route would create a second pipeline intersection in the vicinity of their farm, as it would cross the Moose Jaw asphalt pipeline leading to the tank farm.

Alliance stated that it proposed a minor reroute on the Irving land to move the intersection of its pipeline with the Enbridge corridor approximately 350 m to the southeast. The Irvings were concerned that this minor reroute would increase the total length of right-of-way across their land and move the pipeline closer to their neighbour.

### 2.3.6 Environmental Matters

The Irvings indicated that, based on their experience with the 1998 construction of Enbridge's 914 mm (36 inch) diameter pipeline, they were of the opinion that the extent of damage through their farmland would be significant should Alliance proceed with its proposed route. Alliance stated that it would ensure that the concerns and evidence brought forward by the Irvings in this proceeding were reviewed in detail with its pipeline contractor prior to commencement of construction on the Irvings' land. Alliance also stated that it would ensure that its on-site personnel and inspectors were familiar with the post-construction reports for the recent Enbridge project, so that any identified deficiencies in past construction could be avoided.

The Irvings also expressed concerns regarding grading practices and the restoration of land contours and vegetation. Alliance indicated that it did not see any reason why the land contours and vegetation on the Irvings' land could not be restored to an equivalent state. On the quarter of Section 8 leased by the Irvings (NE 8-19-23 W2M), Alliance submitted that it would attempt to restore the ravines and valley slopes of the Qu'Appelle River as close to preconstruction slopes as possible and to an angle which would be geotechnically stable. Alliance stated that it would revegetate them with a native seed mix and that, in time, there would be some encroachment of trees and shrubs onto the right-of-way.

Alliance noted that the dust control measures to be implemented on gravel access roads during construction are outlined in the company's Environmental Plans and would be the responsibility of the contractor. Alliance stated that, should it receive a request for additional dust control measures from a landowner, it would be willing to entertain it, in consultation with its construction supervisor and environmental inspector.

*Views of the Board*

The Board notes that the crossing location of the Qu'Appelle River valley was not contested as a control point, and recognizes that the proximity of the valley to the Irvings' land limits the potential for alternate routes that would avoid their lands. The Board accepts that a northern route to avoid the Irving land would result in greater disturbance of this sensitive river valley.

The Board notes that Alliance's proposed route parallels the Cochin right-of-way, in keeping with a principal routing criterion presented by the company during the certificate hearing. The Board recognizes that the environmental issues are similar on both the proposed route and a conceptual route to the south. The Board is of the view that the residual environmental effects after mitigation for the proposed route of Alliance would be similar to those that would be encountered on a route to the south. However, the Board is of the view that the proposed detailed route of Alliance minimizes the length and area of land which would be disturbed by construction and operation and, hence, is preferable with respect to environmental issues.

Certificate GC-98 requires Alliance to carry out all measures in its Environmental Plans, as applicable, to the land owned and leased by the Irvings. The Board is of the view that, with the implementation of these measures, the land contours and vegetation can be restored to an equivalent state within a reasonable period of time.

The Board notes that Alliance did not fully commit to provide additional dust control measures if requested to do so by a landowner. Any approval by the Board of the plans, profiles, and books of reference for the subject lands will include a condition requiring Alliance to provide all reasonable additional dust control measures requested by the Irvings.

### 2.3.7 Engineering and Safety Matters

There are six major pipelines which intersect on the Irvings' farm approximately 240 m from the existing farmyard. In addition, the Enbridge/Moose Jaw Asphalt Tank Farm and Pumping Station is located on the western boundary of the farm. The Irvings believe a substantial safety risk is being introduced to their farm and submitted that the addition of a 914 mm (36 inch) diameter natural gas line frightens them. This apprehension was based on the fact that one of the family members had witnessed two pipeline explosions in western Saskatchewan and another family member had encountered what he believed were unsafe conditions while working on pipelines.

The Irvings raised safety concerns with respect to the construction of the Alliance Pipeline, which would parallel the Cochin Pipeline across the five Enbridge pipelines which vary in age, diameter, and the products being transported.

The Irvings further raised concerns about whether it would be safe to live in proximity to this pipeline intersection. Alliance responded that it believed that the Irvings would be safe and further submitted that it would not want to ask any landowner to live close to a pipeline that the company did not consider safe.

Alliance acknowledged that there is a correlation between the number of miles of pipe in service and the number of incidents. Alliance submitted, however, that an increased number of pipelines does not necessarily imply increased risk. To clarify, Alliance noted that the most significant risk it sees is third-party damage such as where a backhoe strikes the pipeline. Alliance indicated that, with five or six pipelines together in the same marked location, the risk of third-party damage does not necessarily increase.

For the pipeline crossings, Alliance stated that it would seek permission from Enbridge and that it would establish together with Enbridge and Cochin the location of the pipelines, the products being transported, and the precautions to be taken during construction at the intersection. The pipelines would be hand exposed prior to any mechanical excavation in the immediate area.

In crossing under the Enbridge pipelines, Alliance noted that there would be a minimum of 2.13 m (7 feet) of cover. This is based on approximately 0.92 m (3 feet) of cover over the 914 mm (36 inch) Enbridge pipeline plus the 0.3 m (1 foot) of separation under it for the Alliance Pipeline. Alliance submitted that, with this amount of cover, the potential for third-party damage to the Alliance Pipeline at the intersection would be minimal.

In addition, Alliance submitted that it would have a variety of integrity programs in place for the pipeline starting with intensive monitoring of the manufacture of the materials that go into the pipeline. Other aspects of the integrity monitoring program identified by Alliance include: (i) having inspectors on the right-of-way to make sure that the pipeline is built according to specifications; (ii) running smart/internal pigs[1] through the pipeline to monitor for stress corrosion cracking and anomalies; (iii) aerial patrols; and (iv) emergency response manuals.

The Irvings requested that Alliance provide a description of what would happen in a worst-case scenario, namely a rupture at the intersection near their farmyard. Alliance submitted that, based on other incidents, if one of the Enbridge pipelines failed, it likely would not affect the Alliance Pipeline. Alliance noted that an explosion of the Alliance Pipeline would likely involve the Enbridge lines under which it passes at the intersection. Alliance noted that a 914 mm (36 inch) pipeline failure would be a localized event with a spectacular flame shooting straight up. Alliance submitted that, in its opinion, the Irvings can feel safe with their residence being 500 m from the intersection. The Irvings further explored whether Alliance planned on modelling to obtain further scientific data on what happens when there are failures where there are five or six pipelines together. Alliance stated that it had not modelled these sorts of situations as they are extremely low probability events. Alliance further submitted that it reviewed previous pipeline incidents to determine the distance from the Cochin Pipeline to put its pipeline and the separation needed under the Enbridge pipelines.

The Irvings inquired if the crossing by the Alliance Pipeline of aging pipelines at the intersection, in close proximity to their residence, would justify the use of thicker-walled pipe. Alliance noted that, in areas of higher population density, there is a greater probability that someone will be excavating close to the pipeline and that additional wall thickness is therefore provided at such locations. Alliance indicated that, since the proposed intersection of these pipelines is in the middle of a field, it is extremely unlikely

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[1] A "pig" is an industry term for an in-line inspection tool.

that someone would be excavating without the knowledge of the Irvings or Alliance. Further, it would be necessary to dig through the Enbridge pipelines to reach the Alliance Pipeline.

Alliance stated that it would expect there would be some incremental benefit from a safety perspective in upgrading the pipeline to Class 2 but characterized the benefit as marginal or not significant. Nonetheless, Alliance stated that if that additional safety margin substantially alleviated the Irvings' concerns, the company would be prepared to upgrade the pipeline. The Irvings indicated that, in their view, upgrading the pipeline would be an improvement.

***Views of the Board***

The general design and safety of the Alliance Pipeline were addressed during the certificate hearing.

However, the Board recognizes the unique situation in which the Irvings find themselves with the proposed addition of a seventh major pipeline to the intersection in proximity to their farmyard. While the increase in risk may be minimal, the Board notes Alliance's willingness to upgrade the pipeline to Class 2 and the Irvings' view that this would be an improvement. Accordingly, any approval by the Board of the plans, profiles, and books of reference for the subject lands will include a condition requiring Alliance to submit to the Board for approval, with a copy to the Irvings, at least 90 days prior to the commencement of construction on the subject lands, a detailed crossing design for the intersection with the Enbridge corridor utilizing thicker-walled pipe conforming to CSA Z662 requirements for Class 2.[1]

In respect of modelling worst case scenarios, the Board accepts Alliance's position that the design of crossings and separation of the pipelines were addressed during the certificate hearing. The assessment of accidents and malfunctions was required by the *Canadian Environmental Assessment Act*, and this information which forms part of the public record is summarized in section 4.18 of the Comprehensive Study Report prepared for the Alliance Pipeline Project.

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[1] Design requirements for oil and gas pipeline systems are set out in Canadian Standards Association ("CSA") Standard Z662, which is incorporated by reference into the Board's *Onshore Pipeline Regulations*. Pipe that is designed with a Class 1 location factor for non-sour gas service can operate at up to 80 per cent of the specified minimum yield stress for the pipe steel. In comparison, pipe designed with a Class 2 location factor can be operated at up to 72 per cent of the specified minimum yield stress for the pipe steel.

### 2.3.8 Other Matters

*Easement Agreements*

Mr. John Irving Sr. signed the original land easement with Enbridge (then IPL) in the 1950s. The Irvings stated that, since that time, there has been a constant demand for extra easements. Based on this experience, the Irvings expressed concern there would continue to be a demand for additional pipelines across their land in the future. Alliance could not assure the Irvings that, should they sign an easement agreement for the Alliance Pipeline across their land, no other pipelines would follow. Alliance indicated that, should it expand its own facilities, it would likely add compressor stations and that the probability of this occurring would be better than 50 per cent, but with the timeframe being very uncertain. Alliance stated that the probability of the company adding a second pipeline through looping was much lower.

The Irvings submitted that their farm and use of their land, such as the future establishment of farmyards by the Irving sons and potential development of a gravel pit, are limited by the presence of pipeline easements and safety zones. The Irvings also suggested that, once an easement agreement is signed, the pipeline company holds the rights to the future of the land.

The Irvings also submitted that pipeline companies do not take into consideration the specific circumstances, safety, disruption of land, etc. that are unique to each landowner's situation. The Irvings were of the view that their farm, with a major pipeline intersection of six and possibly seven pipelines carrying a variety of products and varying in age up to 50 years, is a unique situation and should be treated as such. The Irvings noted that the Alliance Pipeline would cut their farm in half over four to five quarters and would present unique disruption and safety issues. In their view, this is a totally different situation than that of a pipeline crossing a remote corner of a farm which is not in proximity to any residences.

The Irvings submitted that there is no real reason for them, which benefits them in any way, to sign easement agreements.

*Landowner/Pipeline Company Relations*

The Irvings also stated that they had never had any enquiries as to whether they were being treated fairly by pipeline companies, and suggested that there is a lot of work to do in the area of establishing a level playing field when landowners are required to deal with pipeline companies. The Irvings submitted that the following areas of study might bring light to landowners' concerns: (i) the usefulness of a landowners' union; (ii) the availability of legal counsel to landowners; (iii) a monitoring system of the integrity of the negotiating process; and (iv) the difficulty of the objection procedure.

In relation to that third point, the Irvings suggested that, as an independent party, the Board should take more responsibility in monitoring landowner/pipeline company relations and should not simply accept the pipeline companies' propositions and theories of landowner/pipeline company relations as absolute truth. More specifically, the Irvings recommended that the Board conduct an independent survey of landowners for more accurate and less biased statistics of landowner opinion.

***Views of the Board***

Section 86 of the *NEB Act* requires that land acquisition agreements (easement agreements) contain certain provisions, as set out in that section. The Board examined sample agreements during the Alliance certificate hearing and was satisfied that their form complied with the requirements of section 86.

Pursuant to section 87 of the *NEB Act*, the Board also requires pipeline companies to serve notices on all affected landowners and tenants prior to the execution of land acquisition agreements. The notice must (i) identify and describe the land required; (ii) provide details of the value of the land required and the compensation being offered; (iii) describe the procedure for the approval of the detailed route of the pipeline; and (iv) describe the procedure for negotiation and arbitration should no agreement on compensation be reached.

The Board notes the Irvings' concerns with respect to the signing of easement agreements. However, the negotiation of the specific terms of an easement agreement is solely a matter for the pipeline company and the landowner. The Board's authority with respect to easement agreements is limited to ensuring compliance with section 86 of the *NEB Act*.

The Board has taken under advisement the submissions made by the Irvings on the matter of landowner/pipeline company relations. With respect to this subject, the Board wishes to point out that two of the four corporate goals set out in its 1999-2000 *Report on Plans and Priorities* to the Parliament of Canada[1] relate to landowner rights and public engagement.[2] Key activities to be carried out this fiscal year in fulfilling these two goals include (i) refined approaches for early public notification and detailed route hearings and (ii) the conduct of a community and landowner needs assessment.[3] The Board welcomes the constructive suggestions of landowners, such as the Irvings, based on their first-hand experience.

*Disruption to Farming Operation*

The Enbridge corridor and Cochin right-of-way intersect at what the Irvings described as the nucleus of their farm. The Irvings stated that it is at the point where pipeline disruption to the farm has become out of control. They stated that they are subject to environmental checks, regular airplane checks, digs, and

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1 The *Report on Plans and Priorities* and other Board publications may be accessed through the Internet at www.neb.gc.ca. Hardcopies may be obtained by writing to the Board or by calling the Board toll-free at 1-800-899-1265.

2 The Board's second corporate goal for 1999-2000 is to ensure that "NEB-regulated facilities are built in a manner that protects the environment and respects individual rights". The fourth goal is to ensure that the "NEB meets the evolving needs of the public to engage in NEB matters".

3 One of the key activities for Goal 2 is to: "Refine approaches for Early Public Notification and for conducting proceedings, particularly Detailed Route Hearings, to ensure individual rights are respected and participation is facilitated". One of the key activities for Goal 4 is to: "Conduct a community and landowner needs assessment to identify information requirements and the preferred means of delivery from the NEB and regulated pipeline companies in the areas of safety, lands and environment."

repairs. The Irvings submitted that, as a result of the intersection of the Enbridge corridor and the Cochin right-of-way on their land, the farm must accommodate the increased activity, safety issues, and construction and repair activities associated with the convergence of the pipelines. They also described how, during construction, right-of-way fencing and trenching interferes with the movement and security of their cattle, the movement of haying machinery and harvested hay, and the timing of swathing.

The Irvings described the disturbance to their land during the 1998 construction of Enbridge's Terrace Expansion, and stated that reclamation activities were continuing into 1999. The Irvings indicated that they would then be faced with Alliance's construction on their land scheduled to start in July 2000. They stated that the dual construction of these lines will divide their farm and impact normal farming operations severely. Based on their experience with Enbridge's 1998 Terrace construction program, the Irvings questioned whether an evening shift could be employed so as to minimize the duration of construction activities across their lands.

Alliance stated that it understood that the construction of energy pipelines on the Irvings' land has been a source of inconvenience and disturbance to their farming operation in the past. Alliance acknowledged that the construction of its pipeline in 2000, following completion of reclamation activities for the Enbridge Terrace Expansion, would cause additional inconvenience and disturbance. However, Alliance submitted that it considers the issue of disturbance and inconvenience to be one that can be the subject of compensation, and that the company is committed to providing the Irvings with a fair compensation package to take into account their particular situation.

Alliance stated that there are a number of things that the company can do to try to minimize the inconvenience to the Irvings' farming operations, such as providing locations to allow for movement of machinery and livestock across the right-of-way. Alliance stated that it was prepared to work with the Irvings on almost a daily basis during construction. Alliance also noted that a land agent will be assigned to each construction spread to facilitate communication with landowners so that the company can react quickly to their changing needs.

***Views of the Board***

The Board recognizes that the Enbridge corridor and Cochin right-of-way intersect at the nucleus of the Irvings' farm and fragment their land. The Board also recognizes that construction and operation activities associated with these pipelines have disrupted farm operations and the use of the land, and that the construction and operation of the Alliance Pipeline would contribute to these ongoing disruptions. The Board further notes that the Irvings will have had to endure at least three consecutive years of construction and reclamation activities with the Alliance Pipeline following the Enbridge Terrace Expansion.

The Board considers that, while the disruption to the farming operation from individual construction and maintenance activities may be short term and mitigable, the cumulative disruption of six and now seven pipelines is greater than the sum of the disruption from the individual activities and represents a special situation. The Board notes Alliance's statement that the Irvings would be provided with a fair compensation package to take into account their particular situation.

The Board also notes that the existing pipelines are owned by two different companies, transport a variety of products, and are of varying ages. The addition of the Alliance Pipeline will introduce a third company and further diversify the characteristics of the pipelines on the land. The Board recognizes that these factors influence the ability of the companies to coordinate construction and maintenance activities so as to minimize disruption to the Irvings' farm operation.

The Board notes that Alliance did not respond to the Irvings' suggestion that, through scheduling of work crews, the duration of construction activities on their land be minimized. The Board also notes that Alliance has proposed construction in the area of the Irvings' farm during the summer of 2000, which would occur during the busiest time of year for their farming operation. Therefore, any approval by the Board of the plans, profiles, and books of reference for the subject lands will include a condition requiring Alliance to develop, in consultation with the Irvings, a construction schedule and mitigation plan for the subject lands that minimizes both the duration of activities and disruption to the farming operation. The schedule and plan shall be submitted to the Board for approval and copied to the Irvings at least 90 days prior to commencement of construction on the subject lands.

**Decision**

**The Board is satisfied on the evidence that no reasonable alternate route exists that avoids the Irvings' land, addresses their concerns, and avoids existing environmental constraints.**

**Having considered all of the environmental, engineering and safety, and other matters described above, the Board finds, on balance, that the route proposed by Alliance is the best possible detailed route for the pipeline in this case and finds that, with the implementation of the conditions below, Alliance will have committed to the most appropriate methods and timing of construction.**

**Any approval by the Board of the plans, profiles, and books of reference for the subject lands will include the following conditions:**

1. **Alliance shall submit to the Board for approval and copy to the Irving family, at least 90 days prior to the commencement of construction on the subject lands, a detailed crossing design for the intersection with the Enbridge corridor utilizing heavier thicker-walled pipe conforming to CSA Z662 requirements for Class 2.**

2. **Alliance shall develop, in consultation with the Irvings, a construction schedule and mitigation plan for the subject lands that minimizes both the duration of activities and disruption to the farming operation. The schedule and plan shall be submitted to the Board for approval and copied to the Irving family at least 90 days prior to commencement of construction on the subject lands.**

3. **Alliance shall implement all reasonable additional dust control measures requested by the Irvings.**

**Any approval will also include a condition requiring Alliance to fulfill all of the commitments made by the company in the course of this detailed route proceeding, as well as those arising from the above conditions. The Irvings are entitled to seek a remedy from the Board if any of the commitments are not being fulfilled.**

**If a commitment cannot be fulfilled at any time, Alliance will be required to provide to the Board, and to the Irvings, a written explanation as to why the commitment cannot be fulfilled together with a description of the measures that the company proposes to otherwise take to address the concerns of the Irvings. If dissatisfied with the explanation and/or the alternate measures being proposed, the Irvings may file a complaint with the Board and seek an appropriate remedy.**

| R.J. Harrison | D. Valiela | J.S. Bulger |
|---|---|---|
| Presiding Member | Member | Member |

Calgary, Alberta
Dated 18 May 1999

## 2.4 Decision on Route Objection by Ms. Katharine Murphy O'Flynn Heard by the Board on 15 April 1999 in Regina, Saskatchewan

### 2.4.1 Introduction and Background

On 3 December 1998, the National Energy Board ("Board") issued a certificate of public convenience and necessity approving the construction and operation of the Alliance Pipeline Project in Canada. This followed a 77-day public hearing and a comprehensive study on potential environmental effects. The Board also approved the general route of the pipeline at that time.

Alliance Pipeline Ltd. ("Alliance") subsequently applied to the Board for approval of plans showing the proposed detailed route of the pipeline in Canada. As required by section 34 of the *National Energy Board Act* ("*NEB Act*"), Alliance served notices on owners of lands proposed to be acquired and published notices in publications serving the areas in which the lands are situated. Landowners and other interested persons opposing the detailed routing of the Alliance Pipeline were given 30 days in which to file a written statement of opposition with the Board.

The Board is conducting public hearings in response to the route objections. As prescribed by section 36 of the *NEB Act*, the issues for the detailed route hearings are limited to (i) the best possible detailed route of the pipeline and (ii) the most appropriate methods and timing of constructing the pipeline. The Board is not reconsidering the issues that were addressed during the certificate hearing, such as the need for the pipeline and its general route. Compensation for land use is also outside the scope of the detailed route hearings.

This decision pertains to the statement of opposition that was filed by Ms. Katharine Murphy O'Flynn on 7 January 1999. The hearing into Ms. O'Flynn's objection was held on 15 April 1999 in Regina, Saskatchewan with Ms. O'Flynn, her tenant Mr. Wilfred Brandt, and Alliance participating.[1]

Alliance plans to construct and operate the Canadian portion of a natural gas pipeline system from northeastern British Columbia and northwestern Alberta, across Saskatchewan, to the midwest United States. The Canadian portion of the system will consist of approximately 2300 kilometres ("km") of pipeline ranging up to 1067 millimetres in diameter and other facilities including seven mainline compressor stations. Construction across Ms. O'Flynn's land is scheduled to begin in late May 2000 and the pipeline is scheduled to be in service in the second half of that year.

### 2.4.2 Proposed Detailed Route

The route proposed by Alliance would cross land identified as W½ & SE 25-15-19 W2M between approximately kilometre posts ("KP") 1394.5 and 1396.8. The proposed route would follow a southeastern alignment, crossing a gravel road, and then head east for approximately 200 metres ("m"), crossing the west boundary of Ms. O'Flynn's land and a TransGas Pipeline. The route would then proceed again in a southeasterly direction crossing two gravel roads and traverse the edge of an area identified as wet terrain.

### 2.4.3 Routing Rationale

In eastern Alberta and Saskatchewan, the proposed Alliance Pipeline route generally parallels the existing Cochin Pipeline. Alliance stated that since (i) the Cochin route had originally been aligned to accommodate a second right-of-way on its northern boundary, (ii) the Cochin Pipeline connects to the same general location as the Alliance Pipeline, and (iii) the Cochin Pipeline follows a relatively straight line between its connection points, paralleling the existing Cochin Pipeline generally permitted Alliance to minimize the overall right-of-way length while respecting other routing criteria. However, where particular land use, environmental, or engineering constraints occur, Alliance assessed other alignments in order to determine the most appropriate route in the specific circumstance.

Alliance indicated that any re-routing of the pipeline, in order to avoid Ms. O'Flynn's land, would require alignment through wetlands located to the northwest and south of the O'Flynn land. Alliance also indicated that, through discussions with the Canadian Wildlife Service ("CWS"), these wetlands have been identified as important environmental features in the area. Alliance expects that the CWS would have concerns regarding re-routing through such wetlands, particularly as summer construction is proposed for this area. Alliance submitted that such re-routes would also entail additional cost and involve constructability issues.

### 2.4.4 Nature of Objection

Ms. O'Flynn's objection was based on several grounds, including (i) disruption to farming activities, (ii) potential decrease in land value, (iii) possible negative health risks, (iv) emergency response and

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[1] The hearing record includes a map showing Ms. O'Flynn's land in relation to Alliance's proposed detailed route (part of Exhibit B-11).

environmental monitoring, (v) land use restrictions, (vi) intrusion and inconvenience of any future inspection programs for pipeline maintenance, (vii) safety risks, and (viii) the potential danger of the abandonment of the pipeline without removal.

### 2.4.5 Alternate Routes

Ms. O'Flynn did not propose any alternate routes in evidence. Refer to "Environmental Matters" for a discussion on alternates that were explored by Alliance in light of Ms. O'Flynn's objection.

### 2.4.6 Environmental Matters

*General*

The land in the vicinity of Ms. O'Flynn's land is predominantly cultivated for grain crops, interspersed with numerous wetlands of various sizes. Three existing gas pipeline rights-of-way traverse the local area and intersect on Ms. O'Flynn's land. Alliance stated that no rare or endangered species are known to occur in the area.

Ms. O'Flynn owns three quarter-sections of land, all of which are cultivated for a variety of grains by a tenant farmer, Mr. Brandt, who has rented the land since 1976. Alliance plans to commence construction in the vicinity of Ms. O'Flynn's land in late May 2000 and anticipates a construction period of eight to ten weeks.

*Alternate Routes*

Alliance stated that there were no environmental or engineering reasons to deviate from the Cochin Pipeline right-of-way in the vicinity of Ms. O'Flynn's land. However, in response to Ms. O'Flynn's concerns about the pipeline on her land, Alliance evaluated deviating around the land to the north and to the south. Alliance indicated that the large wetlands were the primary environmental constraint to these two alternate routes.

Alliance submitted that, because of the large wetlands at the southwest corner of Ms. O'Flynn's land and further east at KP 1399, the southern alignment required to avoid them would result in a lengthy and costly re-route. The northern alternate would follow the northern boundary of Ms. O'Flynn's land and intersect a large wetland along the southern edge of Section 35 for a distance of 600 m. Alliance submitted that this alternate would be approximately 300 m longer which would translate into about $300,000 in additional construction costs. Moreover, Alliance stated that the crossing of the large wetland would pose constructability concerns and be an issue to the CWS (as described below under "Wetlands").

Alliance stated that, based on these issues, it concluded that the proposed route was the best route.

*Wetlands*

Several small wetland areas that are seasonally inundated lie on Ms. O'Flynn's land and one large, more permanent wetland extends over the southwest corner. A second large wetland is located on the edge of Section 35, directly adjacent to the northwest corner of Ms. O'Flynn's land. Alliance stated that most if

not all wetlands in the area had been disturbed by cultivation at some point in time. Mr. Brandt stated that, with the exception of the farmyard, he farms all of Ms. O'Flynn's land and estimated that he cultivates the wetlands about two years out of every five, depending on weather conditions. Mr. Brandt also indicated that he has observed variability in the abundance of ducks and geese in the area, depending upon the amount of water present in a given year.

Alliance stated that, during the preliminary routing exercise carried out for the original project application, it consulted with the CWS regarding the wetlands in the area. Alliance stated that the CWS identified concerns regarding construction through several of the large wetlands, with respect to disturbance of nesting waterfowl and other migratory birds between April 15th and July 15th. Alliance stated that the CWS did not express concern regarding the low-lying areas on Ms. Flynn's land that are traversed by the proposed route.

As Alliance has proposed summer 2000 construction in this area, it indicated that traversing the larger wetlands during the timing restriction identified by the CWS would require mitigation to minimize disturbance to nesting birds. Alliance clarified that the only ecological function or value known for the wetlands in the vicinity of Ms. O'Flynn's land was that of providing resting and possibly nesting habitat. Alliance indicated that for summer construction, it would typically implement a mowing program prior to April 15th in order to prevent birds from nesting in the immediate area so as to minimize disturbance to nesting birds. Alliance stated that this measure would address any concerns the CWS may have regarding constructing across the large wetland in Section 35, adjoining the northwest corner of Ms. O'Flynn's land.

Mr. Brandt indicated that the Municipality of Bratt's Creek has proposed a drainage project to drain the wetlands to the north of Ms. O'Flynn's land in Section 35 as well as the wetland in the southwest corner of her land, and that Ms. O'Flynn has been contributing financially to this project for the last three years.

*Environmental Degradation*

Ms. O'Flynn expressed concern with respect to the health risks associated with potential spills of hazardous materials, contamination of groundwater, and gas emissions. Alliance stated that the spill prevention and response measures that it would implement in the field during construction are described in its Environmental Plans, a copy of which was provided to Ms. O'Flynn. Finally, Alliance stated that it would contact Mr. Brandt, as tenant, during its notification process whether it be in response to a spill or any other activity on the right-of-way.

Alliance stated that as no valve sites or compressor station would be located on the O'Flynn land, it would not anticipate that any gas emissions would occur. Finally, Alliance indicated that due to the impermeability of the heavy clay soils on the land, spills would likely not migrate to the groundwater table. Alliance further stated that its environmental inspectors would be responsible for ensuring that all the commitments Alliance has made, including the measures in the Environmental Plans, are implemented during construction, including the spill response measures and the spills contingency plan.

Alliance identified the protection of topsoil, through appropriate stripping and control of wind erosion, to be the primary environmental concern anticipated on the O'Flynn land. Alliance indicated that implementation of proper mitigative measures for these issues would also be the responsibility of its environmental inspectors. Finally, in response to Mr. Brandt's concerns regarding potential soil

subsidence, Alliance indicated that, should landowners or occupants identify subsidence along the ditch line, the company would respond quickly to remedy the problem.

***Views of the Board***

The Board recognizes the local abundance of wetlands and the role of weather from year to year in influencing habitat use and sensitivity. The Board notes that the proposed route traverses a large wetland near KP 1399 that presents similar environmental and constructability issues as presented by the wetland immediately to the northwest of Ms. O'Flynn's land. The Board also notes Alliance's submission that the mitigation measures that would be implemented by Alliance when constructing across these larger wetlands would satisfy the general concerns of the CWS with respect to disturbance of nesting waterfowl and other migratory birds. However, while recognizing that mitigation is possible to address these concerns in this case, the Board is of the view that avoidance of wetlands is an appropriate routing criterion and should be respected where possible.

The Board notes the homogeneity of the agricultural land in the vicinity of Ms. O'Flynn's land and is of the view that environmental issues with respect to agricultural land would be similar for the proposed and alternate routes. The Board is of the view that implementation of the preventative and response measures described in Alliance's Environmental Plans should minimize adverse effects of construction and operation of the proposed pipeline on the agricultural use and productivity of Ms. O'Flynn's land.

The Board is of the view that the residual environmental effects after mitigation for the proposed route of Alliance would be similar to those that would be encountered on the alternate routes. However, the Board is of the view that the proposed detailed route of Alliance minimizes the length and area of land which would be disturbed by construction and operation and, hence, is preferable with respect to environmental matters.

### 2.4.7 Engineering and Safety Matters

In her objection, Ms. O'Flynn raised concerns respecting (i) the ongoing risks associated with pipeline operations, (ii) whether there would be an emergency response plan, and (iii) the future abandonment of the pipeline.

Ms. O'Flynn suggested that the placement of a pipeline is not a one-time affair but rather a continuing risk. Mr. Brandt also expressed safety concerns, noting that there had been a pipeline rupture about 3 km (2 miles) south of land that he farms. It was noted that the Alliance Pipeline would add to the current web of pipelines, power lines, and fibre-optic cables over which Mr. Brandt is farming.

Concerns with the pipeline crossing just north of the yard site were also raised. Although the yard site is vacant, Mr. Brandt noted that his family resides at the site four months a year, two months during the spring for spraying and two months later in the year during harvest.

With respect to safety concerns, Alliance submitted that its pipeline system has been designed in accordance with the Board's Onshore Pipeline Regulations and the latest edition of the Canadian Standards Association Oil and Gas Pipeline Standard, designated CSA Z662. Alliance stated that, for the area in question, the pipeline has been designed for a Class 1 location. In respect of operations of its

pipeline system, Alliance noted that it will conduct (i) monthly aerial patrols, (ii) annual patrols consisting of ground surveillance along the entire right-of-way by either walking or by the use of quads (four-wheeled all-terrain vehicles), and (iii) periodic cathodic surveys at the locations where cathodic leads and test posts have been installed. With respect to coordinating these activities, Alliance observed that there is a potential of sharing some of the aerial patrols with Cochin. The fact that these patrols would be scheduled at different times would provide twice the coverage since the pipelines will generally be parallel.

Alliance stated that the minimum distance from the proposed centreline of the pipe to the yard site on Ms. O'Flynn's land is approximately 250 m and that the distance to the actual residence is in the vicinity of 350 m. Alliance stated that this is consistent with the Company's routing criteria and noted that in Canada the closest distance from the pipeline to residences is in the vicinity of 60 to 70 m.

Alliance advised that, pursuant to condition 44 of Certificate GC-98 and the requirements of the Board's *Onshore Pipeline Regulations*, an emergency response plan will be submitted to the Board for approval prior to the commencement of operation of the pipeline. Alliance also provided an outline of how the emergency response plan would be carried out using its control centre that will be staffed 24 hours a day.

Alliance noted that the Estlin Compressor Station had been moved east of the optimum location as a result of discussions with Ms. O'Flynn and another landowner. Alliance submitted that re-routing to accommodate Ms. O'Flynn's objection would further increase the distance between the Estlin and upstream compressor stations and would further impact the hydraulic design of the pipeline.

***Views of the Board***

The general design and safety of the Alliance Pipeline were addressed during the certificate hearing. As no site-specific issues regarding design and safety were identified during the detailed route hearing for Ms. O'Flynn's objection, these matters will not be further addressed in this decision.

The subject of abandonment was addressed in the Comprehensive Study Report for the Alliance Pipeline Project, dated September 1998. As noted in that report, Alliance would be required to apply to the Board under section 74 of the *NEB Act* for leave to abandon the pipeline. A screening would also be required under the *Canadian Environmental Assessment Act* to consider the significance of any potential adverse environmental effects of the abandonment.

### 2.4.8 Land Matters

Mr. Brandt expressed concern regarding the potential disruption to his farming activities during construction of the pipeline, particularly with respect to moving equipment across the right of way during seeding. Alliance stated that, just prior to construction, its land agent would contact Mr. Brandt to determine his activities on the land and to identify any last-minute requirements he may have of Alliance and its contractor. Alliance indicated that, should a landowner or occupant require access across the right-of-way, it would leave areas large enough to accommodate farm machinery.

***Views of the Board***

The Board notes that disruption to farming activities would occur during construction, but that it would be short term and that, through Alliance's commitment to consult with Ms. O'Flynn and Mr. Brandt, it would be minimized.

### 2.4.9 Other Matters

In her statement of opposition, Ms. O'Flynn noted that there seem to be restrictions placed on the potential use(s) of the easement land and surrounding lands as specified in the easement agreement. She went on to state that this effectively takes away land rights normally associated with ownership of the land and appears to place potential restrictions on surrounding land for which no compensation is offered.

Alliance indicated that this concern is one of compensation and does not relate to the matters of routing and the methods and timing of construction.

***Views of the Board***

Section 112 of the *NEB Act* and the *National Energy Board Pipeline Crossing Regulations* made under that section provide for a 30 m safety zone on either side of the right-of-way.[1] This legislation regulates certain activities in the vicinity of the pipeline which could pose a threat to safety, and is not intended to place any other limitations on the use of the land adjacent to the right-of-way.

Anyone intending to excavate using power-operated equipment or explosives for any purpose within the safety zone must first obtain permission from the pipeline company. In most cases, this permission would be granted once the pipeline company has identified the precise location of the pipeline. Should a company refuse, application may be made to the Board for permission.

Any specific restrictions on activities on the right-of-way would be set out in an easement agreement. Pursuant to subsection 4(1) of the *National Energy Board Crossing Regulations, Part II*, Alliance will also be required to address, in its public awareness program, activities that could place the landowner or pipeline at risk.

**Decision**

**Having considered all of the environmental, engineering and safety, and other matters described above, the Board finds, on balance, that the route proposed by Alliance is the best possible detailed route for the pipeline in this case and finds that**

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1 Subsection 112(1) of the *NEB Act* states as follows: "*Subject to subsection (5), no person shall, unless leave is first obtained from the Board, construct a facility across, on, along or under a pipeline or excavate using power-operated equipment or explosives within thirty metres of a pipeline.*" The *National Energy Board Pipeline Crossing Regulations* were made under subsection (5) and govern in more detail excavation activities in the vicinity of a pipeline.

**Alliance has committed to the most appropriate methods and timing of construction.**

**Any approval by the Board of plans, profiles, and books of reference for the subject lands will include a condition requiring Alliance to fulfill all of the commitments made by the Company in the course of this detailed route proceeding. Ms. O'Flynn and Mr. Brandt are entitled to seek a remedy from the Board if any of the commitments are not being fulfilled.**

**If a commitment cannot be fulfilled at any time, Alliance will be required to provide to the Board, and to Ms. O'Flynn and Mr. Brandt, a written explanation together with a description of the measures that the Company proposes to otherwise take to address the concerns of Ms. O'Flynn and Mr. Brandt. If dissatisfied with the explanation and/or the alternate measures being proposed, Ms. O'Flynn or Mr. Brandt may file a complaint with the Board and seek an appropriate remedy.**

| R.J. Harrison | D. Valiela | J.S. Bulger |
|---|---|---|
| Presiding Member | Member | Member |

Calgary, Alberta
Dated 5 May 1999

## 2.5 Decision on Route Objection by Mr. Vernon Tymkow Heard by the Board on 27 April 1999 in Edmonton, Alberta

### 2.5.1 Introduction and Background

On 3 December 1998, the National Energy Board ("Board") issued a certificate of public convenience and necessity approving the construction and operation of the Alliance Pipeline Project in Canada. This followed a 77-day public hearing and a comprehensive study on potential environmental effects. The Board also approved the general route of the pipeline at that time.

Alliance Pipeline Ltd. ("Alliance") subsequently applied to the Board for approval of plans showing the proposed detailed route of the pipeline in Canada. As required by section 34 of the *National Energy Board Act* ("*NEB Act*"), Alliance served notices on owners of lands that it proposed to acquire, and published notices in publications serving the areas in which the lands are situated. Landowners and other interested persons opposing the detailed routing of the Alliance Pipeline were given 30 days in which to file a written statement of opposition with the Board.

The Board is conducting public hearings in response to the route objections. As prescribed by section 36 of the *NEB Act*, the issues for the detailed route hearings are limited to (i) the best possible detailed route of the pipeline and (ii) the most appropriate methods and timing of constructing the pipeline. The Board is not reconsidering the issues that were addressed during the certificate hearing, such as the need for the

pipeline and its general route. Compensation for land use is also outside the scope of the detailed route hearings.

This decision pertains to the statement of opposition that was filed on 31 January 1999 by Mr. Vernon Tymkow, whose land is located just north of Edmonton, Alberta. The hearing into Mr. Tymkow's objection was held on 27 April 1999 in Edmonton, Alberta, with Mr. Tymkow and Alliance participating.[1] Mr. Tymkow was represented by Mr. Orest Rusnak.

Alliance plans to construct and operate the Canadian portion of a natural gas pipeline system from northeastern British Columbia and northwestern Alberta, across Saskatchewan, to the midwest United States. The Canadian portion of the system will consist of approximately 2300 kilometres ("km") of pipeline ranging up to 1067 millimetres ("mm") in diameter and other facilities, including seven mainline compressor stations. Construction north of Mr. Tymkow's land is scheduled to begin in the summer of 1999 and the pipeline is scheduled to be in service in the second half of 2000.

### 2.5.2 Proposed Detailed Route

The route proposed by Alliance would not be located on Mr. Tymkow's land but would follow an easterly alignment as it approaches and runs approximately 14 metres ("m") to the north of the north property boundary of his land, identified as NW 14-55-23 W4M. The proposed route would approach and cross Highway No. 28A, at the entrance to Mr. Tymkow's property, and then parallel the pipeline rights-of-way of Federated Pipe Lines Ltd. ("Federated") and Peace Pipe Line ("Peace"). The proposed route would also traverse areas identified as wet terrain and pass through the edge of an area identified as bush.

### 2.5.3 Nature of Objection

Mr. Tymkow's objection was based on his concern that the proposed route could have an impact on his safety and on his anticipated future road, subdivision, and dugout projects.

### 2.5.4 Routing Rationale

Alliance indicated that, in this area, a route was selected that would approach the existing Federated and Peace rights-of-way to the east of the Tymkow land. The existing pipeline rights-of-way could then be followed in an easterly direction towards the proposed crossing of the North Saskatchewan River, approximately 10 km east of the Tymkow land.

To the west of the Tymkow property, the route was constrained by the need to locate a suitable crossing of the Sturgeon River Valley. According to Alliance, few suitable crossing locations exist due to extensive development along the Sturgeon River Valley. The most appropriate gap in the existing residential development along the valley was considered by Alliance to be the gap between the Grandview Heights community (to the south of the proposed right-of-way) and the Sturgeon Valley Vista community (to the north of the proposed right-of-way).

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1 The hearing record includes a map showing Mr. Tymkow's land in relation to Alliance's proposed detailed route and three alternates suggested by Mr. Tymkow (Drawing No. AP-9950-2987, Revision 4, filed as Exhibit B-28); the wall-size version of this map, Exhibit B-49, was marked during the hearing to denote key features.

In the immediate vicinity of the Tymkow property, the existing Federated and Peace rights-of-way are routed just inside the south and east boundaries of the Tymkow property. Alliance indicated that it arrived at its proposed route through a great amount of consultation, and that it is the most direct route, being the most economically efficient and causing the least amount of disturbance.

Alliance indicated that there was landowner opposition to routing the pipeline on the southernmost 25-acre parcel in the southeast quarter of Section 22. Alliance also indicated that, in an attempt to address Mr. Tymkow's concerns, it resolved to cross Highway 28A at an angle so as to route the pipeline from the northeast quarter of Section 15 into the southwest quarter of Section 23, avoiding Mr. Tymkow's land.

### 2.5.5 Alternate Routes

Mr. Tymkow proposed three alternate routes. The first alternate route would depart from the proposed Alliance route at approximately KP 644.9 and follow an easterly route crossing two gravel roads and Highway 28A. At approximately KP 649, the first alternate route would head in a southeasterly direction and re-join the proposed Alliance route near KP 649.8.

The second alternate would follow and depart from the first alternate route at approximately KP 647.4, heading in a southeasterly direction for about 1.4 km before re-joining the proposed Alliance route near KP 648.7.

The third alternate route would depart from the proposed Alliance route at approximately KP 646.3 and follow a southeasterly direction for approximately 1.0 km. The route would then head in an easterly direction for approximately 950 m and then take a northerly direction for approximately 800 m before re-joining the proposed Alliance route near KP 648.1.

Alliance presented a comparison of its route with the alternates suggested by Mr. Tymkow, which is reproduced as Table 2-2.

As shown by the table, Alliance estimated that the incremental cost associated with Mr. Tymkow's alternates would range from $70,000 to $1,190,000. Mr. Tymkow submitted that the routing of Alternates 1 and 2 could be adjusted so as to make the cost of each comparable to the cost of Alliance's proposed route.

Alliance noted that the selection of a detailed route in the Sturgeon River area had been difficult due to the need to select a suitable river crossing location (approximately 7 km west of the Tymkow property) and, with that control point set, the need to address the concerns of landowners east of the Sturgeon River. Alliance submitted that its proposed route in this area had been arrived at through consultation with a number of landowners and that the company had attempted, where practical and possible, to take into account landowner desires.

Alliance said that, other than for the owner of the land to the north of Mr. Tymkow's land (Mr. Kenny Bowman), it did not know what those landowner wishes would be if the routing were altered. Alliance submitted that it had acquired a pipeline easement along the southern boundary of Mr. Bowman's property, being the only alignment he would entertain with respect to that parcel.

Alliance's proposed route would require an additional 10 m of clearing compared to Alternates 1 and 2. Alternate 3 would require no clearing. Alliance's proposed route would also cross 10 m more of wet terrain than Alternate 1, and 200 m more than Alternate 2 (which would not cross any wet terrain). Alternate 3 contains two 90 degree bends which, Alliance indicated, would require a significant amount of temporary workspace.

Alternates 1 and 2 would affect two additional parcels of land and Alternate 3 would affect three additional parcels of land, compared to Alliance's proposed route. However, the alternates would offer additional separation from the nearest residence. The separations would be 180 m, 200 m, and 170 m, respectively, for the three alternates, versus the 105 m separation for Alliance's proposed route.

Further analysis of the routing considerations is provided in the following sections entitled "Environmental Matters and Agricultural Practices," "Engineering and Safety Matters," and "Land Use."

**Table 2-2**
**Comparison of Routing Considerations Between the Proposed Alliance Route and the Suggested Landowner Routes**

| Routing Considerations | Alliance Routing | Alternate 1 | Alternate 2 | Alternate 3 |
|---|---|---|---|---|
| **Length (km)** | 4.9 | 5.06 | 4.97 | 6.03 |
| **Length following existing pipelines (km)** | 2.36 (50.5%) | 0 | 1.12 (22.7%) | 3.34 (55.7%) |
| **Length following other existing linear features (km)** | 0.76 (16.3%) | 0 | 0 | 0 |
| **Foreign pipeline crossings** | 0 | 0 | 0 | 2 |
| **Road crossings** | 3 | 3 | 3 | 3 |
| **Railroad crossings** | 0 | 0 | 0 | 0 |
| **Watercourse crossings** | 0 | 0 | 0 | 0 |
| **Clearing required (m)** | 90 | 80 | 80 | 0 |
| **Wet terrain (m)** | 200 | 190 | 0 | 260 |
| **Other environmental constraints** | Nil | Nil | Nil | A significant amount of temporary workspace would be required at the 90° bends |
| **Affected parcels of land** | 6 | 8 | 8 | 9 |
| **- new parcels** | N/A | 3 | 3 | 3 |
| **Points of intersection** | 5 | 6 | 6 | 6 |
| **Distance to residences (m)** | 105 m to residence on Tymkow property | 180 m to residence in NW 23 | 200 m to residence in NW 23 | 170 m to residence on Tymkow property |
| **Other engineering considerations** | Nil | Nil | Nil | Two 90° bends in the pipe |
| **Approximate cost*** | $4,900,000 | $5,060,000 | $4,970,000 | $6,030,000 |
| **Incremental cost** | N/A | $160,000 | $70,000 | $1,190,000 |

* Based on Alliance's cost of construction estimate of approximately $1,000 per lineal metre

### 2.5.6 Environmental Matters and Agricultural Practices

*Land Description*

Mr. Tymkow's land and the surrounding properties are in predominantly agricultural production. Most of the area is cultivated with some hay production. This area is generally very flat with some low-lying areas of poor drainage. Old lake deposits influence the soil types and drainage.

Small remnants of native vegetation, generally Aspen trees, are found in the area. There are a number of low-lying wetland areas on the land surrounding the Tymkow property.

An esker running in a northwest-southeast direction is the only high land in the area. The esker is a subglacial feature with very sandy soils. West of this elevation the soils are predominantly clays and heavy clays, while to the east the soils are somewhat sandier.

*Drainage*

Mr. Tymkow indicated that his land drains naturally to four locations. One site has been excavated to create a dugout, and Mr. Tymkow indicated that he plans to excavate three more sites to provide a natural water supply. He believes the installation of the Alliance Pipeline would disrupt this natural drainage pattern and jeopardize the development of the water supply for irrigation.

The distance between the existing dugout and Mr. Tymkow's northern property line was estimated to be 24 m. The distance between the property line and the pipeline was estimated to be 14 m. Mr. Tymkow plans to remove the topsoil between his property line and his existing dugout located in the northeast portion of his quarter-section. Mr. Tymkow was of the view that Alliance, in routing its proposed pipeline, did not take into account differences in elevation and the natural drainage pattern. He submitted that the natural drainage pattern from north to south would encourage the erosion of the topsoil over the pipeline, exposing the pipeline over time.

Mr. Tymkow also stated that he plans to excavate a major dugout at a location near the entrance to his property. He submitted that his preferred location for the dugout is near the northwest corner of his property, adjacent to his proposed access road to the farm, and the proposed location of the pipeline. However, he also submitted that the dugout could be relocated in a north-south direction within a distance of 90 m, but that this would isolate part of his land from cultivation. Alliance indicated that its proposed route would avoid dugouts on Mr. Tymkow's land.

*Agriculture*

Mr. Tymkow indicated that he is planning to cultivate his quarter-section as chemical-free land. This requires that no chemicals be added to the land for a five-year period before the land attains chemical-free status. Presently, Mr. Tymkow's quarter-section is in alfalfa, which does not require the use of chemicals.

Mr. Tymkow expressed concern that the pipeline, to be located on the adjacent field north of his quarter-section, would adversely affect his plans for the future development of his property and, in particular, the

potential loss of farm income. Alliance and Mr. Tymkow both expressed a willingness to meet and discuss the issues.

***Views of the Board***

Based on the evidence submitted by both parties, the Board is of the view that there are no significant environmental differences between Alliance's proposed route and Alternates 1 and 2 suggested by Mr. Tymkow, particularly if the routing of these alternates were refined so that the length of each more closely approximates that of Alliance's proposed route.

### 2.5.7 Engineering and Safety Matters

*Site-Specific Design Considerations*

Mr. Tymkow was concerned with the proximity of the pipeline to his property and the depth of burial. He also indicated that he had advised Alliance of his plans to construct a major dugout at the entrance to his property as well as a new road, which would parallel the northern boundary of his quarter-section, and which he planned to construct during 1999. Furthermore, he noted that he would be moving heavy machinery in the area and that this would be in conflict with the pipeline.

Alliance stated that, under Highway 28A, and at the entrance to Mr. Tymkow's property, the design stress levels would be 50 percent of SMYS [1] as required by CSA Z662 for road crossings designed with a Class 2 location factor. Alliance also stated that, due to the potential for development in the area, the pipe would be designed using a Class 2 location factor from Morinville to just east of Fort Saskatchewan, which would result in designed maximum stress levels of 72 percent of SMYS. The pipe would be buried to a minimum depth of 1.07 m below the bottom of the topsoil on cultivated lands, a minimum 1.8 m below the highway centreline, and 1.4 m below ditch bottom.

When asked if a lot of his concerns regarding the use of his land and the present location of the proposed pipeline could be resolved with further discussions with Alliance, Mr. Tymkow conditionally agreed.

*Emergency Response Planning*

Mr. Tymkow was concerned with Alliance's ability to respond quickly in the event of an emergency, particularly when things did not go as planned, and wanted to know what Alliance would do to ensure his safety. He submitted evidence related to pipeline failures and emergency response times. Mr. Tymkow also indicated that the prevailing winds in the area were from the northwest and that he was concerned because his access to Highway 28A would be cut off in the event of a leak or rupture. His concerns were exacerbated by the fact that there were already four liquids pipelines, owned by Federated and Peace, running along the south and east sides of his property. Mr. Tymkow was of the view that, should the Alliance Pipeline be routed along the north side of his property, a "safety hazard trap" would be created due to the presence of pipelines on three sides of his property.

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1 SMYS refers to the specified minimum yield strength of the steel. For comparison, pipe that is designed with a Class 1 location factor can operate at up to 80 percent of SMYS in accordance with *Canadian Standards Association Z662 - Oil and Gas Pipeline Systems* ("CSA Z662").

With respect to emergency response planning, Alliance expressed its belief that adequate safety measures had been taken and that the pipeline system was designed appropriately. Alliance submitted that Mr. Tymkow's concerns related to emergency response planning would more appropriately be dealt with in the post-construction and pre-operation phase. Alliance indicated that, in accordance with Condition 44 of Certificate GC-98, it would submit to the Board for approval its emergency procedures, as required pursuant to sections 48 and 49 of the Board's *Onshore Pipeline Regulations*, at least 30 days prior to the commencement of operation. Alliance also indicated that it was willing to sit down with Mr. Tymkow and discuss his concerns.

*Aerial Patrols*

Alliance submitted that it would likely conduct aerial patrols over its line once a month. Alliance also indicated that, by paralleling other pipelines and coordinating aerial patrols, it would increase its pipeline surveillance through the sharing of information between the pipeline companies. By virtue of the fact that there are two other pipelines that could be paralleled, Alliance would derive the benefit of the information obtained during the additional two monthly overflights.

***Views of the Board***

The general design and safety of the Alliance Pipeline were addressed during the Alliance certificate hearing and will not be further addressed in this decision. In the certificate proceeding, Alliance committed to meet or exceed the design requirements of the Board's *Onshore Pipeline Regulations*, the latest edition of CSA Z662, and other accepted industry standards and practices.

As noted above, Alliance is required to submit its emergency procedures to the Board for approval at least 30 days prior to the commencement of operations. Section 48 of the *Onshore Pipeline Regulations* requires that a company's emergency response procedures be set out in its operation and maintenance manuals. Section 49 requires that these emergency procedures include, among other things, evacuation procedures. The Board notes Alliance's willingness to meet and discuss its emergency procedures with Mr. Tymkow.

The Board recognizes that Mr. Tymkow's circumstances are unusual in that Alliance's proposed routing would result in Mr. Tymkow having pipelines along three sides of his quarter-section. The Board also recognizes that Mr. Tymkow would be required to accept some level of additional risk should the pipeline be located as proposed by Alliance. The Board is of the view, however, that this additional risk would be minimal and that it would be offset, for the most part, by Alliance's use of a Class 2 location factor for the design of the pipeline immediately to the north of Mr. Tymkow's property.

The Board is of the view that Alliance's proposed route and all three of Mr. Tymkow's suggested alternates would be technically feasible. The Board also notes that Alternates 1 and 2 could be adjusted so as to make their cost comparable to the cost of Alliance's proposed route.

The Board notes that both Mr. Tymkow and Alliance indicated their willingness to meet to discuss design and safety related issues, and encourages both parties to follow through in this regard.

### 2.5.8 Land Use

*30 m Safety Zone*

Mr. Tymkow indicated that a "controlled area" or safety zone, as described in the Board's pamphlet entitled "Pipelines - a Guide for Landowners and Tenants", should not be necessary if the Alliance Pipeline is safe. Alliance indicated that one of the major concerns with pipeline safety is third party damage, including someone digging over the pipeline and causing damage. The 30 m safety zone is intended to ensure that landowners are not excavating near the pipeline without the company's knowledge.

Mr. Tymkow further noted that, although the pipeline easement was not on his property, he would be affected by the 30 m safety zone. He also indicated that his neighbour, Mr. Bowman, may not care about his safety, especially in light of the fact that Mr. Bowman was only prepared to accept the pipeline directly adjacent to the Tymkow property. Alliance stated that it would ensure that Mr. Bowman, or whoever may be the landowner or occupant of that land, would take appropriate precautions during any excavation near or over the pipeline.

***Views of the Board***

Section 112 of the *NEB Act* and the *National Energy Board Pipeline Crossing Regulations* made under that section provide for a 30 m safety zone on either side of the right-of-way.[1] This legislation regulates certain activities in the vicinity of the pipeline which could pose a threat to safety, and is not intended to place any other limitations on the use of the land adjacent to the right-of-way.

Anyone intending to excavate using power-operated equipment or explosives for any purpose within the safety zone must first obtain permission from the pipeline company. In most cases, this permission would be granted once the pipeline company has identified the precise location of the pipeline. Should a company refuse, application may be made to the Board for permission.

Any specific restrictions on activities on the right-of-way would be set out in an easement agreement. Pursuant to subsection 4(1) of the *National Energy Board Crossing Regulations, Part II*, Alliance will also be required to address, in its public awareness program, activities that could place the landowner or pipeline at risk.

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1 Subsection 112(1) of the *NEB Act* states: "*Subject to subsection (5), no person shall, unless leave is first obtained from the Board, construct a facility across, on, along or under a pipeline or excavate using power-operated equipment or explosives within thirty metres of a pipeline.*" The *National Energy Board Pipeline Crossing Regulations* were made under subsection (5) and govern in more detail excavation activities in the vicinity of a pipeline.

*Residences and Road Access*

Mr. Tymkow also submitted that Alliance's route was not the best route because it would interfere with access to his property and the use of his land. Mr. Tymkow has prepared building sites for future residences on his property. He indicated that he is not required to apply for permission to put additional homes on his property as long as he meets building codes and municipal requirements. Three of the four residences would be located in the northeast part of his property, which is the poorest agricultural land but provides opportunities for farm sites. Mr. Tymkow's permanent residence is unfinished, although he indicated that he is currently occupying the house.

Mr. Tymkow has delayed the construction of an access road to his residence until the final alignment of the Alliance Pipeline is determined. However, Mr. Tymkow indicated that the access road would be built this year, following the north boundary line of his property.

Alliance indicated that the only development discussed between it and Mr. Tymkow was the construction of the access road to the Tymkow residence. Alliance submitted that its proposed route would avoid this access road, and disagreed with any suggestion that its pipeline would have an impact on the subdivision and development of the Tymkow property. Alliance submitted that it has reviewed the County of Sturgeon Land Use Bylaw in respect of potential development restrictions and noted that there are no setback requirements from pipelines. Alliance also indicated that it does not have a 200 m setback distance requirement.

***Views of the Board***

The Board notes Alliance's commitment to avoid Mr. Tymkow's proposed access road, and is of the view that appropriate arrangements could be made in this regard. With respect to future development on the Tymkow property, the Board notes that the proposed pipeline would be designed using a Class 2 location factor, which would not constrain development of a subdivision with higher population density. Although the 30 m safety zone is within the Tymkow property, the Board is of the view that the proposed pipeline would not have an appreciable impact on Mr. Tymkow's future plans for subdivision.

### 2.5.9 Other Matters

*Negotiations*

Alliance stated that it first contacted Mr. Tymkow on 27 August 1997 and made five subsequent contacts after that date. Mr. Tymkow indicated that it was his understanding that an agreement had already been made with his neighbour, Mr. Kenny Bowman, prior to the initial contact with himself and, as such, the pipeline had already been located. Alliance denied that statement and indicated that an agreement was not in place with Mr. Bowman prior to the first contact with Mr. Tymkow.

Mr. Tymkow raised a further concern that an easement agreement was in place with Mr. Bowman before proper negotiations were conducted with himself. Alliance indicated that, although it did not have a formal written objection from Mr. Tymkow, it was aware of his objection to a route across his property.

Alliance also indicated that the comprehensive notes of its land agents indicated that Mr. Tymkow was not satisfied with Alliance's proposed routing.

***Views of the Board***

Negotiation and acquisition of land rights is solely a matter to be discussed between the pipeline company and the landowner. The Board has no mandate to determine how, or at what stage, a company should contact landowners to define its route.

**Decision**

**Based on the evidence in this proceeding, the Board considers that Alternates 1 or 2 are potentially as good as or better than the proposed route. Having considered all of the environmental, engineering and safety, land use, and other matters described above, the Board finds, on balance, that the route proposed by Alliance has not been demonstrated to be the best possible route for the pipeline in this case. Therefore, the Board has decided to deny the approval of the detailed route of Alliance as currently applied for in this area.**

**As in any case where the approval of a detailed route is denied, the applicant may apply for a new detailed route. Alternatively, if the applicant wishes to propose the same route again, the Board notes that the applicant has the option of filing an application pursuant to section 21 of the *NEB Act* for a review of the Board's decision, if the criteria of that section are satisfied. These criteria are prescribed in the *National Energy Board Rules of Practice and Procedure, 1995* and provide, among other things, that a review may be sought if a change in circumstances or new facts have arisen which could raise a doubt as to the correctness of the Board's original decision. The Board notes that, as the hearing progressed, Mr. Tymkow appeared more accepting of Alliance's proposed detailed route. In denying the detailed route, as currently applied for by Alliance, the Board does not wish to preclude the parties from engaging in further dialogue and from potentially reaching a settlement which would satisfy the interests of all concerned.**

| R.J. Harrison | D. Valiela | J.S. Bulger |
|---|---|---|
| Presiding Member | Member | Member |

Calgary, Alberta
Dated 28 May 1999

## 2.6 Decision on Route Objection by Ms. Margaret Cook Heard by the Board on 29 & 30 April 1999 in Edmonton, Alberta

### 2.6.1 Introduction and Background

On 3 December 1998, the National Energy Board ("Board") issued a certificate of public convenience and necessity approving the construction and operation of the Alliance Pipeline Project in Canada. This followed a 77-day public hearing and a comprehensive study on potential environmental effects. The Board also approved the general route of the pipeline at that time.

Alliance Pipeline Ltd. ("Alliance") subsequently applied to the Board for approval of plans showing the proposed detailed route of the pipeline in Canada. As required by section 34 of the *National Energy Board Act* ("*NEB Act*"), Alliance served notices on owners of lands that it proposed to acquire, and published notices in publications serving the areas in which the lands are situated. Landowners and other interested persons opposing the detailed routing of the Alliance Pipeline were given 30 days in which to file a written statement of opposition with the Board.

The Board is conducting public hearings in response to the route objections. As prescribed by section 36 of the *NEB Act*, the issues for the detailed route hearings are limited to (i) the best possible detailed route of the pipeline and (ii) the most appropriate methods and timing of constructing the pipeline. The Board is not reconsidering the issues that were addressed during the certificate hearing, such as the need for the pipeline and its general route. Compensation for land use is also outside the scope of the detailed route hearings.

This decision pertains to the statement of opposition that was filed on 25 January 1999 by Ms. Margaret Cook, whose land is located just north of Edmonton, Alberta. The hearing into Ms. Cook's objection was held on 29 and 30 April 1999 in Edmonton, Alberta, with Ms. Cook, Mr. William Middagh of Fort Sask. Engineering Inc. (her consultant), and Alliance participating.[1] Ms. Cook was represented by Mr. Richard Secord of Ackroyd, Piasta, Roth & Day. A site visit was also conducted the evening of 29 April 1999 involving the Board and all hearing participants.

Alliance plans to construct and operate the Canadian portion of a natural gas pipeline system from northeastern British Columbia and northwestern Alberta, across Saskatchewan, to the midwest United States. The Canadian portion of the system will consist of approximately 2300 kilometres ("km") of pipeline ranging up to 1067 millimetres ("mm") in diameter and other facilities, including seven mainline compressor stations. Construction south of Ms. Cook's land is scheduled to begin in July of 1999 and the pipeline is scheduled to be in service in the second half of 2000.

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1 The hearing record includes a map showing Ms. Cook's land in relation to Alliance's proposed detailed route and the first alternate route suggested by Ms. Cook (Drawing No. AP-9950-2986, Revision 4, filed as Exhibit B-51); the wall-size version of this map, Exhibit B-53, was marked during the hearing to denote key features. During the hearing, Ms. Cook filed a map depicting her second alternate route (Exhibit C-13-5).

### 2.6.2 Proposed Detailed Route

Alliance's proposed pipeline route runs to the south of Ms. Cook's property, identified as SW 30-55-23 W4M, through property owned by Mr. Tom Eppinga of Triple T Dairy Farm Ltd. ("Triple T"). At its closest point, Alliance's proposed route runs approximately 80 m from Ms. Cook's property line, through a shallow north-south gully. The point where the proposed pipeline route would intersect this gully is approximately 110 m from the entrance to her property, 150 m from her residence and 200 m from the home that is occupied by her farm manager.

### 2.6.3 Routing Rationale

Alliance indicated that routing in this area was constrained by the need to locate a suitable crossing of the Sturgeon River Valley. Due to extensive residential development along the Sturgeon River Valley, few suitable crossing locations exist. Alliance indicated that the most appropriate gap in the existing residential development was considered to be the gap between the Grandview Heights community (to the south of the proposed right-of-way) and the Sturgeon Valley Vista community (to the north of the proposed right-of-way). Alliance submitted that land use, environmental, and geotechnical elements all factored significantly in route selection.

Alliance indicated that consultation with landowners revealed that a significant expansion of the Triple T dairy farm, located in the E½ of Section 24, had been planned. To resolve this concern, Alliance submitted that it moved its proposed crossing of Triple T to the SE¼ of Section 25. However, subsequent investigations revealed that the new route would encounter a rare plant community (which includes Hollis fescue). Alliance therefore proposed to shift the new route slightly to the south, but this route adjustment was opposed by Triple T due to a concern that any realignment would bring the pipeline closer to a water well used to supply the Triple T dairy operation.

Alliance then investigated another alternate, slightly to the north, that would avoid the rare plant community in the SE¼ of Section 25. Alliance indicated that this routing was acceptable to Triple T, as well as the owners of the SW¼ of Section 25 who would also be affected by the deviation.

### 2.6.4 Nature of Objection

Ms. Cook's objection was based on safety concerns associated with (i) the proximity of the proposed route to the two houses on her property and to her driveway, (ii) the depth of cover in the north-south gully to the south of her residence and the potential for erosion of that cover, and (iii) the stability of the banks of the Sturgeon River Valley.

### 2.6.5 Alternate Routes

Ms. Cook proposed two alternate routes, one before the hearing ("Alternate 1") and one during the hearing ("Alternate 2"). Alternate 1 would depart from the Alliance route at approximately KP 639.9. This route would follow a southeasterly alignment for approximately 525 m, jogging in an easterly direction for approximately 125 m and then heading in a southeasterly direction again for approximately 550 m. This route would re-join the Alliance route at approximately KP 641.

Following a site visit that took place as part of the detailed route hearing, Ms. Cook proposed Alternate 2. This route would run between Alliance's proposed route and Alternate 1. Alternate 2 would follow Alliance's proposed route up the east valley wall of the Sturgeon River and then head southeast to a point where it would cross the north-south road, to the north of an existing Baytex Energy Ltd. ("Baytex") pipeline right-of-way and to the south of a dugout on the Triple T property.[1] Ms. Cook noted that Alternate 2 could be varied such that Alliance's route would be on the south side of the Baytex pipeline.

Alliance presented a comparison of its route and Alternate 1, which is reproduced as Table 2-3:

**Table 2-3**
**Comparison of Routing Considerations Between the Proposed Route and Alternate 1**

| Routing Considerations | Alliance Routing | Alternate 1 |
|---|---|---|
| Length (km) | 1.2 | 1.2 |
| Length following existing pipelines (km) | 0 | 0 |
| Length following linear features (km) | 0 | 0 |
| Foreign pipeline crossings | 1 | 1 |
| Road crossings | 1 | 1 |
| Railroad crossings | 0 | 0 |
| Watercourse crossings | 0 | 0 |
| Clearing required (m) | 180 | 190 |
| Wet terrain | 0 | 0 |
| Other environmental and engineering considerations | Nil | Traverses two steep gullies, a sand pit and a garbage dump. |
| Affected parcels of land | 2 | 2 |
| - new parcels | N/A | 0 |
| Points of intersection | 2 | 2 |
| Distance from nearest residence on Triple T property | 450 | 250 |
| Distance from nearest residence on Cook property | 150 | 375 |
| Approximate cost | $1,200,000 | $1,225,000 |
| Incremental cost | N/A | $25,000 |

### 2.6.6 Environmental Matters

*General*

The Sturgeon River Valley is the major geographical feature in this area. This river meanders through a flood plain which is bordered by steep valley walls. The valley walls are tree lined and follow the upper edge of the valley. At the top of the valley wall, the land forms a comparatively level plain.

Historically, the vegetation in this area was grassland and aspen. The majority of the grassland is now under cultivation and there are some remnant aspen groves in the area. The Sturgeon River Valley is also important for wildlife and as a remnant ecological zone.

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[1] Alliance stated that the Baytex pipeline is a 114.3 mm (4 inch) diameter line flowing natural gas. This pipeline runs roughly parallel and to the north of Alliance's proposed route across the majority of the Triple T property (SE 25-55-24 W4M). Before reaching the north-south road, the Baytex pipeline takes a sharp turn to the south and crosses the proposed Alliance route. Approximately 150 m south of this intersection, the Baytex line takes another sharp turn and veers east for approximately 110 m (crossing under the north-south road at the midpoint) before veering to the south.

The Sturgeon River Valley has been heavily developed by country residential communities, resulting in a higher housing density than in most rural areas.

*Woodlot Forest Resources*

Alliance described the trees in the area as being primarily poplar, with some birch and a few spruce trees. Alliance's routing would require the removal of trees across the width of the right-of-way for a length of 180 m, while Alternate 1 would require clearing of trees across the width of the right-of-way for a length of 190 m. Alternate 2 would follow Alliance's route through the trees on the valley wall, therefore also requiring the removal of trees for a length of 180 m.

Alliance did not quantify the number or determine the quality of trees that would be removed on Alliance's proposed route or Alternate 1. Alliance stated that it believes that the number of trees that would be cleared on either route would be comparable. The merchantable timber on either route would be given to the landowner or burned on site because the volume is not commercially viable.

*Water Well*

Alliance stated that a water well exists on the Triple T property, in the NE¼ of Section 24, which is approximately 51 m deep. This feature was discussed between Alliance and Mr. Eppinga with regard to routing on his property. A pipeline from this well crosses the quarter-section as it proceeds toward the farm-site.

*Dugout*

A dugout on the dairy farm is located in the pasture near the main road within the NE¼ of Section 24. It is approximately 20 m by 40 m in size. This dugout was used by the county as a borrow source.

Ms. Cook was of the view that the dairy herd used the river as their water supply, and that the dugout was not suitable as a source of water for cattle. However, following a visit to the farm, Ms. Cook indicated that it was apparent that the cattle do use the dugout as a watering source for at least part of the year. According to Ms. Cook, there was some evidence that the dugout is dry during certain times of the year and that, at least sometimes, Mr. Eppinga pumps water from the river into the dugout.

Alliance indicated that an alternative to the dugout for watering the cattle could be arranged. However, Alliance expressed concern that the installation of the pipeline close to the steep walls of the dugout could cause a problem with stability and erosion close to the pipe.

*Soils*

Alliance took two soil samples along its proposed route, in the NW¼ of Section 19, to determine the soil type and topsoil thickness of this field. Soils were sampled adjacent to the proposed route; however Alliance does not believe that a distance of 5 to 15 m from the proposed right-of-way would misrepresent the soil conditions of this field. Alliance also indicated that a soil survey was not conducted on Ms. Cook's alternate route, south of Alliance's proposed route, and south of the gully on the east side of the main road. Ms. Cook submitted that it was doubtful that Alliance could determine the

topsoil depth of this gully based on air photo interpretation and the limited soil sampling, in an area further north, conducted by Alliance's consultant.

Alliance indicated that Mr. Eppinga pointed out that the soil is significantly thinner in the area south of the proposed route and explained that this might be due to wind erosion. According to Alliance, Mr. Eppinga believes that soil reclamation and restoration, in areas with thinner topsoil, would be more difficult, but that it could be done. Alliance also indicated that Mr. Eppinga believes that Alliance could conserve and restore the soil to preconstruction conditions more effectively in an area where the topsoil is deeper. Alliance submitted that successful reclamation could be carried out in these areas with thinner topsoil.

***Views of the Board***

The Board has considered the environmental factors and data used by Alliance and Ms. Cook in comparison of routing considerations for the proposed and alternate routes. The Board notes that the majority of the environmental components identified during the course of these proceedings are found in the Sturgeon River Valley. The proposed route and the alternates do not differ in potential effects on the Sturgeon River Valley. The Board also notes that issues regarding the Sturgeon River Valley were not argued by Ms. Cook.

The Board is of the view that, based on the evidence submitted during this proceeding, there are no significant environmental differences between the proposed route of Alliance and the alternate routes identified by Ms. Cook.

### 2.6.7 Engineering and Safety Matters

*Design Particulars*

Alliance stated that, due to the potential for development in the area, the pipe would be designed using a Class 2 location factor from Morinville to east of Fort Saskatchewan. This would result in a maximum design stress level of 72 per cent of SMYS[1], which exceeds the minimum requirements of the Canadian Standards Association Standard Z662 entitled *Oil and Gas Pipeline Systems* ("CSA Z662"). The pipe would be buried to a minimum depth of 1.07 m below the bottom of the topsoil on cultivated lands, a minimum of 2.7 m below the highway centreline, and a minimum of 1.2 m below ditch bottom. Under the road crossing near Ms. Cook's residence, the design stress levels would be 50 per cent of SMYS.

*Proximity to Residences*

Ms. Cook was concerned by the proximity of Alliance's proposed route to her residence and that of her farm manager, and because egress from her property through the entrance would be cut off in the event of a leak or rupture. Her engineering consultant submitted that, if the pipeline fails, a massive fireball would result due to the high pressure, large diameter, and long distances between shut-off valves. In his

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1 SMYS means the specified minimum yield strength of the steel. For comparison, pipe that is designed with a Class 1 location factor for non-sour gas service can operate at up to 80 per cent of SMYS in accordance with CSA Z662. The class location factor is determined on the basis of building density and usage, with consideration given to possible future development. Only dwellings within 200 m of the pipeline are considered when determining the class location.

view, this would pose a serious threat to Ms. Cook, her animals, and her property. He went on to conclude that the line should be moved south to a position that is as far away as possible without endangering the Triple T dairy farm, and, in any case, to a point that is at least 200 m away from the Cook property line. Ms. Cook noted in argument that a variation of Alternate 2 would place the pipeline equidistant from the Cook and Eppinga residences, which she suggested would afford both residences Class 4 protection.

Alliance submitted that its pipeline is safe and that, from the point of view of Ms. Cook's safety, the alternates that she proposed are not significantly different from the Company's proposed route. Alliance argued that the issue of pipeline safety had already been decided by the Board, following extensive examination in the certificate proceeding, and reiterated that the Class 2 design for this area exceeds minimum code requirements.

*Slope Stability and Erosion*

Ms. Cook was concerned with the slope stability of the river bank and valley wall of the Sturgeon River and provided a report by an engineering consultant which addressed these concerns. Alliance provided a geotechnical report indicating that migration of the river channel was slow in the vicinity of the proposed pipeline crossing and that there would be sufficient time to implement mitigative measures long before the channel would abut the toe of the valley wall. The proposed river crossing is more than 500 m from Ms. Cook's property and Alliance's proposed route up the east valley wall is approximately 200 m from her property. With respect to routing of the pipeline up the valley wall, Alliance submitted that there were no appreciable differences between Alliance's proposed route and Alternate 1.

Alliance indicated that two gullies cross the Triple T pasture where the dairy herd is located during the day. These gullies, which were described as steep-sided and quite deep, would intersect Alternate 1. Alliance pointed out that gullies should be avoided where possible during pipeline construction.

Following the site visit, Ms. Cook suggested Alternate 2, and a variation thereof, which would avoid the two gullies located in the Triple T pasture. Alliance argued that these proposed routes would meet with other engineering constraints and landowner resistance.

Ms. Cook was also concerned with the potential for erosion and the burial depth of the pipeline in the north-south gully to the south of her property, through which the pipeline would cross at its closest point to her residence. Alliance indicated that there was an opening in the trees and that, at this location, the gully was not much more than a large ditch. Alliance indicated that the pipe would be buried at a depth of 1.2 m below the bottom of the topsoil through this gully.

*Costs*

Alliance indicated that Alternate 1 would cost at least $25,000 more to construct than the proposed route because it went through two fairly steep and deep gullies, one of which contained an entanglement of wood and old vehicles which Alliance indicated had been placed there for erosion control. After revisiting the site, Alliance stated that the cost of Alternate 1 would be considerably higher than had been initially estimated.

Alliance indicated that Alternate 2, and subsequent variations thereof, would be less preferable than Alliance's proposed route because of the proximity of the dugout, the Baytex pipeline and the sand pit. Alliance indicated that, in order to stage a horizontal bore under the road, it would typically require a 10 m by 30 m area of working space in each of the four quadrants of land formed where the pipeline crosses the road, in addition to the 18 m permanent easement and 14 m temporary work space. Alliance indicated that Alternate 2 would cost an estimated $75,000 to $100,000 more than Alliance's proposed route because of additional bends and because a longer horizontal bore would be required to go under both the road and the Baytex pipeline. Alliance indicated that there would be no benefit in attempting to parallel the Baytex pipeline at the road crossing and noted that Mr. Eppinga did not want the line further south of Alliance's proposed location.

Alliance submitted that Ms. Cook's alternate routes would interfere with summer activities on the Triple T farm to the extent that construction on Mr. Eppinga's property could not take place in the planned sequence. Alliance indicated that, as pipeline construction is a linear operation, the cost to move the construction spread around Mr. Eppinga's property and then return later would be much greater than any incremental construction costs. Alliance further indicated that it could cost up to $500,000 to bring back an entire pipeline spread, which would involve several hundred workers, to construct an isolated segment of pipeline.

*Paralleling of Existing Linear Features*

Ms. Cook argued that Alternate 2 (which would have the Alliance Pipeline paralleling the Baytex pipeline as it crosses the north-south road) would meet one of Alliance's primary routing criteria, which is to parallel existing linear features wherever practical. Ms. Cook also referred to a 1980 informational letter from the Alberta Energy Resources Conservation Board (now the Alberta Energy and Utilities Board) on the joint use of right-of-way.[1]

In response, Alliance argued that it was not aware of any policy at the Alberta Energy and Utilities Board that would indicate that a 36-inch pipeline should be routed like a 4-inch gas line. Alliance went on to submit that a 36-inch pipeline, in an area such as this, cannot simply follow a 4-inch line alignment having many sharp bends.

***Views of the Board***

The general design and safety of the Alliance Pipeline were addressed during the Alliance certificate hearing and will not be further addressed in this decision. In the GH-3-97 proceeding, Alliance committed to meet or exceed the design requirements of the Board's *Onshore Pipeline Regulations*, the latest edition of CSA Z662, and other accepted industry standards and practices.

The Board notes that the pipeline has been designed using a Class 2 location factor to the south of Ms. Cook's property, which exceeds the minimum requirements of CSA Z662.

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[1] Energy Resources Conservation Board Informational Letter IL 80-11 (dated 3 June 1980) was addressed to all oil, gas, and pipeline operators and states, in part: "The [Energy Resources Conservation] Board ... requests operators who are planning pipeline alignments to consider joint use of unused portions of right-of-way where such a practice would be feasible and would significantly reduce the impact on the landowner's use of his land."

In addition, the Board notes that heavier wall pipe will be used at the crossing of the north-south road. The Board is of the view that Alliance's design is appropriate and that the use of a Class 4 location factor would not be appropriate in these circumstances.[1]

The Board notes that the slope stability at the Sturgeon River crossing location was not contested; in any event, none of Ms. Cook's alternate routes involve changing this crossing point. The Board is of the view that the route proposed by Alliance presents no significant problems with respect to slope stability or erosion, including the area of the gully paralleling the north-south road. Although the Board has received little evidence with respect to slope stability or erosion for the alternate routes, the Board notes that this could also be the case for Alternate 2, or minor variations thereof.

While the Board recognizes paralleling other pipelines as a valid routing criterion, the Board does not consider the paralleling of the Baytex pipeline, for a very short distance across the north-south road, to be an important routing consideration in this case.

From the standpoints of design, constructability, and cost, the Board is of the view that the route proposed by Alliance is clearly superior to Alternate 1, and is as good as or better than any of the other alternate routes proposed by Ms. Cook.

### 2.6.8 Land Use

Alliance indicated that it proposes to be in the area of the Triple T dairy farm in early July 1999 to conduct advance stripping of topsoil, and construction would continue for approximately two to two-and-a-half months. Alliance pointed out that Mr. Eppinga expressed concerns about the timing of construction during Triple T's busiest time of the year. This period would see the farm in the middle of calving and haying operations. Alliance also indicated that Mr. Eppinga raised specific concerns with respect to his herd and access to water supply. Alliance suggested that the use of ditch plugs, to allow cattle to access various parts of the pasture, along with temporary watering facilities might help mitigate the watering and access problems. It was Alliance's view that, based on discussions with Mr. Eppinga, he would have limited flexibility in separating his cattle into different groups for herd management purposes. Alliance submitted that, even with mitigation, if construction were relocated to the south side of the dugout, there would be significant inconvenience to Mr. Eppinga. Alliance also stated that he would object to relocating the pipeline south of the dugout.

Ms. Cook suggested that winter construction would not impact the dairy cattle. Alliance pointed out the difficulty in separating topsoil from subsoil when the ground is frozen during the winter. Alliance submitted that its objective is to pass through agricultural areas during the summer to enable the separation of topsoil and subsoil.

***Views of the Board***

The Board notes that the pipeline construction would impact Triple T during its busiest time of the year. Ms. Cook's alternate routes would involve some additional difficulties, over and above those of Alliance's proposed route, for Triple T during construction.

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1 In accordance with CSA Z662-96, "class location areas where buildings intended for human occupancy with 4 or more storeys above ground are prevalent shall be designated as Class 4 locations."

These difficulties would include interference with herd management and access to water for the cattle. Although mitigation measures could alleviate some of these difficulties, the Board is of the view that the residual difficulties for the farm would impose considerable inconvenience, and are an unnecessary additional burden to place on the Triple T dairy operation. The Board is of the view that Alliance's proposed route reduces the reported difficulties for the Triple T farm to the greatest extent possible.

### 2.6.9 Relief Requested

In argument, Mr. Secord referred to the Board's Reasons for Decision in the Maritimes & Northeast Pipeline Management Ltd. ("M&NP") and Mr. Franklin Irving case.[1] Mr. Secord noted that, in that decision, the Board was of the view that Mr. Irving had demonstrated that the use of his land would be adversely affected and that he had presented significant concerns. In that case, the Board directed M&NP to conduct an evaluation of the alternate route proposed by Mr. Irving to facilitate a detailed comparison with M&NP's proposed route, and reserved its decision pending the filing and examination of the additional information.

Mr. Secord requested that the Board issue a similar direction in this case requiring Alliance to conduct an evaluation of the alternate routes proposed by Ms. Cook and provide a detailed comparison of these alternates to Alliance's proposed route.

Alliance indicated that, in the M&NP/Irving case, Mr. Irving had provided M&NP with an alternate route suggestion two years prior to the detailed route hearing taking place. Alliance also indicated that Ms. Cook provided Alternate 2 to Alliance near the completion of her detailed route hearing, giving Alliance approximately two hours to examine it. Alliance also submitted that, in argument, Mr. Secord requested the examination of a variation of Alternate 2 to the south.

Alliance submitted that the Irving case was distinguishable from this case in that, although aware of Mr. Irving's alternate route for almost two years, M&NP did not conduct a detailed study to allow a careful analysis of the alternate route in comparison to the proposed route.

***Views of the Board***

In the M&NP/Irving case the Board was of the view that further information was required before a decision could be made in respect of the proposed detailed route. In this case, the Board is satisfied that there is sufficient evidence on the record to make a decision.

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1 Refer to the Board's MH-3-98 Reasons for Decision, dated October 1998.

**Decision**

**Having considered all of the environmental, engineering and safety, and land use matters described above, the Board finds that, on balance, the portion of the proposed route subject to Ms. Cook's objection[1] is the best possible route for the pipeline through this area and finds that Alliance has committed to the most appropriate methods and timing of construction. The Board is satisfied that the proposed route appropriately balances the environmental and safety concerns of Ms. Cook with the concern of minimizing disturbance and inconvenience to the Triple T dairy farm operation.**

R.J. Harrison
Presiding Member

D. Valiela
Member

J.S. Bulger
Member

Calgary, Alberta
Dated 28 May 1999

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1 Ms. Cook's objection pertained to the portion of the proposed route of Alliance which extends in an easterly direction from the west bank of the Sturgeon River, to a point on the eastern boundary of NW¼ 19-55-23 W4M.

## Chapter 3

# MH-2-99

## 3.1 Decision on Route Objection by Lloyd & Katherine Olley Heard by the Board on 31 May 1999 in Grande Prairie, Alberta

### 3.1.1 Introduction and Background

On 3 December 1998, the National Energy Board ("Board") issued a certificate of public convenience and necessity approving the construction and operation of the Alliance Pipeline Project in Canada. This followed a 77-day public hearing and a comprehensive study on potential environmental effects. The Board also approved the general route of the pipeline at that time.

Alliance Pipeline Ltd. ("Alliance" or "the Company") subsequently applied to the Board for approval of plans showing the proposed detailed route of the pipeline in Canada. As required by section 34 of the *National Energy Board Act* ("*NEB Act*"), Alliance served notices on owners of lands that it proposed to acquire, and published notices in publications serving the areas in which the lands are situated. Landowners and other interested persons opposing the detailed routing of the Alliance Pipeline were given 30 days to file a written statement of opposition with the Board.

The Board is conducting public hearings in response to the route objections. As prescribed by section 36 of the *NEB Act*, the issues for the detailed route hearings are limited to (i) the best possible detailed route of the pipeline and (ii) the most appropriate methods and timing of constructing the pipeline. The Board is not reconsidering issues that were addressed during the certificate hearing, such as the need for the pipeline and its general route. Compensation for land use is also outside the scope of the detailed route hearings.

This decision pertains to the statement of opposition that was filed on 18 January 1999 by Lloyd & Katherine Olley. The hearing into the route objection was held on 31 May 1999 in Grande Prairie, Alberta, with Mr. and Mrs. Olley and Alliance participating.[1] Mr. and Mrs. Olley were represented by Mr. J. Darryl Carter, Q.C., of the law firm of Carter, Lock and Horrigan. Alliance was represented by Mr. Richard Neufeld and Mr. Alex Ross of the law firm of Fraser Milner.

Alliance plans to construct and operate the Canadian portion of a natural gas pipeline system from northeastern British Columbia and northwestern Alberta, across Saskatchewan, to the midwest United States. The Canadian portion of the system will consist of approximately 2300 kilometres ("km") of pipeline ranging up to 1067 millimetres ("mm") in diameter and other facilities, including seven mainline compressor stations. Construction of the 1067 mm diameter mainline across the Olleys' land is

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1 The hearing record includes a map showing the Olleys' land in relation to Alliance's proposed detailed route and the alternate suggested by Olleys (Drawing No. AP-9950-2976, Revision 2, filed as part of Exhibit B-18); the wall-size version of this map, Exhibit B-28, was marked during the hearing to denote key features.

scheduled for the late fall of 1999. The Alliance Pipeline is scheduled to be in service in the second half of 2000.

### 3.1.2 Proposed Detailed Route

The proposed pipeline runs in a southeasterly direction, diagonally bisecting SW 21-70-8 W6M and crossing the southwest corner of SE 21-70-8 W6M, between Kilometre Posts ("KPs") 183.2 and 184.8, approximately 18 km west of Grande Prairie. The proposed pipeline also parallels the existing Peace Pipe Line ("Peace") right-of-way.

### 3.1.3 Alliance Routing Rationale

Alliance indicated that approximately 3 km downstream of the Olley lands is a control point associated with the Wapiti River crossing location, which has been the subject of extensive investigation and assessment by Alliance, Alberta Fish and Wildlife, and Fisheries and Oceans Canada. Alliance indicated that, even in the early stages of routing, the Wapiti River crossing location was considered to be a control point. Alliance checked several locations both up and downstream and decided that the present crossing location was preferable.

Alliance discovered, through discussions with the Olleys, that they had concerns with the pipeline traversing their land. Alliance then looked at alternate routes that would either deviate to the north or south. Alliance indicated that a deviation to the north would have required a deflection off the Peace pipeline alignment. This was not deemed to be an acceptable route due to the increased length of the pipeline and the encroachment upon the environmentally sensitive Pipestone Creek. Alliance indicated that the creek is nationally significant as a result of a dinosaur fossil discovery in the area. The Pipestone Creek River Valley is also very deeply incised at the confluence of the creek and the Wapiti River.

Alliance evaluated whether it could go south of the Olley property and indicated that this would have required a double crossing of the Peace pipeline. A deflection from the existing corridor would have required an increase in the length of the pipeline. As such, it was decided that a deviation to the south was not the preferred route.

### 3.1.4 Nature of Objection

In their statement of opposition, the Olleys opposed the routing of the proposed pipeline for several reasons. Firstly, the pipeline would cut through their land on a diagonal, destroying all the trees in its path, which the Olleys felt would have an unnecessary detrimental impact on the recreational use and enjoyment of their land. Secondly, since the Alliance Pipeline would run parallel to the existing Peace pipeline, the Olleys were of the view that they would be impacted synergistically. The Olleys treasure their land and believe that it is unique, as it is bounded on the east and north by a deep gorge, known as the Pipestone Creek River Valley, on the south by the deep Wapiti River Valley, and on the west by dead-end roads. In their view, it constitutes a sanctuary.

During the hearing, the Olleys also raised a concern that the entrance to the access road to their property would be restricted during construction.

### 3.1.5 Alternate Route

The Olleys proposed an alternate route that would depart from the proposed route at approximately KP 181.7 and run in a southeasterly direction to approximately KP 183.6. At this point, the alternate route would head in an easterly direction, running immediately adjacent to the south property boundary of the Olleys' lands, and would re-join the proposed Alliance route at approximately KP 184.9. The Olleys indicated that the terrain on the south side of their property was level, whereas Alliance's proposed route would follow very undulating terrain. The Olleys believed that a more southerly route would save Alliance some cost in this respect, as well as preserving their forested land.

In its opening statement, Alliance presented its comparison of the Company's proposed route and the Olleys' alternate, which is reproduced as Table 3-1:[1]

**Table 3-1**
**Comparison of Routing Considerations Between the Proposed Alliance Route and the Suggested Landowner Route**

**Landowner:** **Lloyd and Katherine Olley**
**Legal Locations:** **S½ 21-70-8 W6M**
**Pipeline Segment:** **Alliance Mainline - Alberta (KP 181.75 to KP 184.85)**

| Routing Considerations | Alliance Route | Objector Route |
|---|---|---|
| Length (km) | 3.14 | 3.46 |
| Length following existing linear disturbances | 3.14 (100%) | 1.40 (40%) |
| Foreign pipeline crossings | 0 | 2 |
| Road crossings | 1 | 1 |
| Railroad crossings | 0 | 0 |
| Watercourse crossings | 0 | 0 |
| Clearing required (ha) | 7.3 | 8.9 |
| Wet terrain (m, approx.) | 100 | 100 |
| Other environmental considerations | Nil | Nil |
| Affected parcels of land | 6 | 6 |
| • new parcels | N/A | 2 |
| Residences within 250 m | 0 | 0 |
| Points of Intersection | 5 | 2 |
| Estimated cost to construct* | $3,768,000 | $4,252,000 |
| Incremental cost | N/A | $484,000 |

* Alliance's cost figures appearing in the table are based on the Company's estimated cost of construction for the 1067 mm diameter mainline of approximately $1,250 per metre.

[1] As discussed later in this decision, the cost information contained in the comparison table was challenged by the Olleys during the hearing.

### 3.1.6 Environmental Matters and Land Use

*Setting*

The Olley lands are on the fringe of agricultural and forested land which is primarily aspen woodland interspersed with some wetlands. The area is a transition between the Beaverlodge Plain and the Peace River Valley natural regions.

The Olley lands are primarily recreational and include an original homesteader's cabin built in 1929 with some open land around it which is used for hay production.

*Following Property Boundaries*

In proposing their alternate route, the Olleys indicated a preference for the pipeline route to follow the southern boundary of their property. Alliance indicated that it has not been a routing criterion to follow property boundaries. Alliance also indicated that incorporating and rigidly following such a criterion would have added enormously to the length of the project, with consequent increases in surface disturbance, environmental impact, and capital cost. Alliance also submitted that following property boundaries would conflict with existing and future development.

*Restriction to the Olleys' Access Road*

The Olleys were concerned that construction of the pipeline along the proposed route would cut off the entrance to the access road to their property. The Olleys submitted that this road is the only way to get to the cabin area. The Olleys indicated that they originally purchased the east quarter of the section and found that the only access to it was across private land. An opportunity came up a few years later to purchase the quarter next to the north-south gravel road which gave them access to the original quarter. They then had an access road built which crosses the Peace pipeline very close to the north-south road.

*Forest Resources and Methods of Construction*

The property is largely forested but includes a cleared area surrounding the homestead site and along the Peace right-of-way, which is regularly mowed.

The Olleys stated that they want their land to be a preserve, a sanctuary. Mr. Olley submitted that, at his age, the re-planting of trees is not of much value to him. The Olleys felt that an additional pipeline crossing their land would go that much further to ruining their purpose of owning the land. They also suggested that, once the pipeline right-of-way is clear-cut, it will always remain clear-cut.

Alliance has entered into an agreement to use 8 metres ("m") of the Peace right-of-way for temporary working space and has undertaken to narrow its right-of-way 4 to 5 m, by eliminating the passing lane, to further reduce the amount of clearing required through the Olley property. Alliance provided a commitment to provide screening at access points to reduce the visual effects of clearing additional right-of-way and to install rollback and gates to restrict access, if desired by the landowner.

The Alliance proposed detailed route would require 7.3 hectares of clearing if 8 m of the Peace right-of-way were utilized for temporary work space. This area would be reduced if the right-of-way

were further restricted by 4 or 5 m through the Olley property. Alliance indicated that the Olleys' alternate route would require 8.9 hectares of clearing. Alliance also indicated that, if the Alliance detailed route were switched to the south side of the Peace right-of-way from the north, as was suggested by the Olleys, the pipeline would have to be moved farther away from the Peace pipeline. This would require additional clearing and not allow the use of the Peace right-of-way for temporary work space. Alliance stated that, in order to utilize the Peace right-of-way, the Olleys would have to consent. The Olleys stated that they would not provide this consent.

Alliance indicated that it would commit to working with the Olleys to decide what special construction techniques could be implemented to minimize the effects of clearing on their land. However, Alliance indicated that any condition the Board may impose on Alliance in this respect should be on a best efforts basis.

***Views of the Board***

In keeping with a principal routing criterion, Alliance's proposed detailed route parallels the Peace right-of-way. The Board recognizes that there are opportunities to minimize additional clearing in the area by routing adjacent to an existing right-of-way, and particularly in this instance where, by aligning along the north side of the Peace pipeline, there could be a saving of 8 m of clearing for temporary work space. The Board acknowledges Alliance's undertaking to attempt to reduce the temporary work space by an additional 4 to 5 m.

The Board acknowledges that the environmental issues associated with the proposed detailed route and the alternate route are similar. However, the Board is of the view that Alliance's proposed route minimizes the length and area of land which would be disturbed by construction and operation and, hence, is preferable in that regard.

The Board notes that Alliance has committed to implementing additional measures to reduce the amount of clearing required for the proposed detailed route, and to provide access control measures and visual screening through the property, if desired by the Olleys. Any approval by the Board of the plans, profiles, and books of reference for the subject lands would include a condition requiring Alliance to use its best efforts to consult and reach agreement with the Olleys on the additional measures to be implemented on their property. Any approval would also include a condition requiring Alliance to ensure that reasonable access is made available to the Olleys during construction of the pipeline.

### 3.1.7 Engineering and Safety Matters

*Safety*

The Olleys raised no site-specific safety issues with respect to Alliance's proposed route.

*Constructability*

The Olleys submitted that, based on their knowledge of the area, the terrain along the proposed route is very undulating because it goes through prehistoric sand dunes which form a "U" shape. There is one

dip along the proposed route that would change in elevation between 4.5 and 6 m (15 and 20 feet). The Olleys questioned whether a 1067 mm (42 inch) pipeline would bend as easily as the 324 mm (12 inch) Peace pipeline to go through that type of terrain. The Olleys indicated that there is no undulation along their southerly alternate route. They indicated that the undulating terrain seems to disappear along the south border of their property, where the terrain is relatively level.

Alliance submitted that, based on interpretation of aerial photography, the terrain on either its proposed route or the Olleys' alternate would be similar (i.e., undulating terrain).

***Views of the Board***

The Board notes that the evidence regarding the presence and degree of terrain undulation along the proposed and alternate routes is conflicting to some degree. However, the Board is satisfied that the nature of the terrain in the area would not affect the constructability of the proposed route to any significant extent. The Board is therefore not persuaded on the evidence that the proposed route is inferior, from a constructability perspective, to the suggested alternate route.

### 3.1.8 Costs

The Olleys questioned the costs presented by Alliance in Table 3-1 comparing the proposed route and their alternate route. The Olleys identified that, if the two crossings of their alternate and the Peace pipeline were eliminated, the incremental cost of the alternate could be reduced by $100,000. The Olleys also submitted that their alternate route would provide economic advantages over the route proposed by Alliance since it would avoid undulating terrain, thereby requiring fewer field bends.

The Olleys requested that, based on the new evidence with respect to their alternate route, Alliance undertake to review the incremental cost of the alternate route. Alliance provided a revised table (Exhibit B-42) which identified a decrease of $100,000 for two less pipeline crossings, an increase of $9,000 for engineering and surveying, and an increase of $9,000 for the additional clearing, based on not sharing the right-of-way with Peace pipeline and working in an east to west direction. The new information indicated that the alternate route would result in a net incremental cost of $402,000.

In a letter dated 10 June 1999, the Olleys responded to the revised table and indicated that they did not agree that it would be more expensive for Alliance to follow the alternate route. They submitted that Alliance did not take into account the undulating terrain on their land and the saving in clearing costs that could be achieved by following the cutline along their alternate route. They also submitted that, if Alliance had seriously examined the alternate route, it might have found that the costs of timber salvage, reclamation, and compensation would have been much less.

***Views of the Board***

In the Board's view, incremental cost is a valid routing consideration which has to be weighed against other factors, including landowner concerns, in determining the best possible route.

The Board recognizes that the incremental costs provided by Alliance's expert witness are approximate. The Board has also considered the Olleys' submissions in their letter

of 10 June 1999. On balance, the Board is satisfied that the evidence is sufficient to demonstrate that the incremental cost of the alternate route would be significant.

**Decision**

**Having considered the environmental, engineering and safety, and cost matters described above, the Board finds, on balance, that the route proposed by Alliance is the best possible detailed route for the pipeline in this case and finds that Alliance has committed to the most appropriate methods and timing of construction, subject to compliance with the following conditions:**

1. (a) **Alliance shall use its best efforts to consult and reach an agreement with the Olleys regarding additional measures that the Olleys may wish to have implemented to reduce the effect of the clearing required for the Alliance right-of-way across their quarter-section. These measures may include the sharing of adjacent pipeline right-of-way, reduction of the right-of-way by 4 to 5 m through the elimination of the passing lane, reduction of workspace, and the establishment of access control and visual screening for the Olley lands.**

   (b) **Alliance shall, prior to construction, file with the Board the results of its consultation with the Olleys and implement any of the above measures to which the Olleys may consent.**

2. **Alliance shall ensure that the construction of its pipeline will not unreasonably interfere with the Olleys' utilization of the access road to their property.**

**Any order of the Board approving the plans, profiles, and books of reference for the subject lands will also include a condition requiring Alliance to fulfill all of the commitments made by the Company in the course of this detailed route proceeding. The Olleys are entitled to seek a remedy from the Board if any of the commitments are not being fulfilled.**

**If a commitment cannot be fulfilled at any time, Alliance will be required to provide to the Board, and to the Olleys, a written explanation as to why the commitment cannot be fulfilled together with a description of the measures that the Company proposes to otherwise take to address the concerns of the Olleys. If dissatisfied with the explanation and/or the alternate measures being proposed, the Olleys may file a complaint with the Board and seek an appropriate remedy.**

| R.J. Harrison | D. Valiela | J.S. Bulger |
|---|---|---|
| Presiding Member | Member | Member |

Calgary, Alberta
Dated 20 July 1999

## 3.2 Decision on Route Objection by Dale & Gwen Smith Heard by the Board on 31 May 1999 in Grande Prairie, Alberta

### 3.2.1 Introduction and Background

On 3 December 1998, the National Energy Board ("Board") issued a certificate of public convenience and necessity approving the construction and operation of the Alliance Pipeline Project in Canada. This followed a 77-day public hearing and a comprehensive study on potential environmental effects. The Board also approved the general route of the pipeline at that time.

Alliance Pipeline Ltd. ("Alliance" or "the Company") subsequently applied to the Board for approval of plans showing the proposed detailed route of the pipeline in Canada. As required by section 34 of the *National Energy Board Act* ("*NEB Act*"), Alliance served notices on owners of lands that it proposed to acquire, and published notices in publications serving the areas in which the lands are situated. Landowners and other interested persons opposing the detailed routing of the Alliance Pipeline were given 30 days in which to file a written statement of opposition with the Board.

The Board is conducting public hearings in response to the route objections. As prescribed by section 36 of the *NEB Act*, the issues for the detailed route hearings are limited to (i) the best possible detailed route of the pipeline and (ii) the most appropriate methods and timing of constructing the pipeline. The Board is not reconsidering issues that were addressed during the certificate hearing, such as the need for the pipeline and its general route. Compensation for land use is also outside the scope of the detailed route hearings.

This decision pertains to the statement of opposition that was filed on 18 January 1999 by Dale & Gwen Smith. The hearing into the route objection was held on 31 May 1999 in Grande Prairie, Alberta, with Mr. and Mrs. Smith and Alliance participating.[1] Mr. and Mrs. Smith were represented by Mr. J. Darryl Carter, Q.C., of the law firm of Carter, Lock & Horrigan. Alliance was represented by Mr. Richard Neufeld and Mr. Alex Ross of the law firm of Fraser Milner.

Alliance plans to construct and operate the Canadian portion of a natural gas pipeline system from northeastern British Columbia and northwestern Alberta, across Saskatchewan, to the midwest United States. The Canadian portion of the system will consist of approximately 2300 kilometres ("km") of pipeline ranging up to 1067 millimetres ("mm") in diameter and other facilities, including seven mainline compressor stations. Construction of the 1067 mm diameter mainline across the Smiths' land is scheduled for the winter of 1999/2000. The Alliance Pipeline is scheduled to be in service in the second half of 2000.

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[1] The hearing record includes a map showing the Smiths' land in relation to Alliance's proposed detailed route and the two alternates suggested by the Smiths (Drawing No. AP-9950-2978, Revision 4, filed as part of Exhibit B-18); the wall-size version of this map, Exhibit B-19, was marked during the hearing to denote key features.

### 3.2.2 Proposed Detailed Route

The proposed pipeline route runs in a southeasterly direction, diagonally crossing the southwest corner of SW 4-69-7 W6M between Kilometre Posts ("KPs") 204 and 204.6, approximately 25 km south of Grande Prairie.

### 3.2.3 Alliance Routing Rationale

Upstream of the Smith property, between KPs 90.4 and 196.2, the proposed Alliance route parallels and abuts the existing Peace Pipe Line ("Peace") right-of-way. Alliance indicated that the proposed route deviates from the Peace right-of-way at KP 196.2 (approximately 8 km upstream of the Smith property) in order to avoid a significant wet area associated with Wilson Lake, which is located to the south of the Alliance route between KPs 200 and 208.

Approximately 4 km downstream of the Smith property, at KP 209, the proposed Alliance route approaches existing NOVA Gas Transmission Ltd. ("NOVA")[1] and Enron rights-of-way. These rights-of-way are paralleled and abutted from that point for approximately 25 km further downstream until KP 234 at the Smoky River Valley crossing. Alliance indicated that, early in its routing development, it looked at a route that followed the NOVA right-of-way until it intersected the Peace pipeline and then headed north. That route was rejected because of the additional length of pipeline that would be required and the presence of wet areas.

Alliance submitted that its proposed route through the Smiths' land is a consequence of taking the straightest and therefore lowest cost route between the points of deflection from the Peace and NOVA/Enron rights-of-way.

### 3.2.4 Nature of Objection

In their statement of opposition, the Smiths gave the following reasons for opposing Alliance's proposed route:

(i) They plan to construct their retirement home in the southwest quadrant of the quarter-section. In their view, the pipeline, together with road allowance setbacks, would impose unacceptable restrictions on the future development of their land.

(ii) They are concerned about the safety risks associated with the proposed pipeline.

(iii) The alignment would cut through their land on a diagonal and, if allowed, would destroy all the trees in its path on both the 18 metre ("m") wide right-of-way and the adjacent 14 m temporary workspace.

During the hearing, the Smiths submitted that they bought the land as an undisturbed quarter-section and planned to keep it in its natural state. They also submitted that the clearing would increase their safety concerns due to easier access for hunters.

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[1] NOVA is now a wholly-owned subsidiary of TransCanada PipeLines Limited.

### 3.2.5 Alternate Routes

The Smiths proposed two alternate routes. The first alternate would run in a southeasterly direction, traversing the extreme northeast corner of their property and paralleling a Cabre Exploration Ltd. pipeline. The second alternate would follow the existing NOVA and Enron rights-of-way to the south of their property.

The suggested alternate routes did not extend to connect to the proposed Alliance route. Alliance indicated that, for comparison purposes, it was necessary to find a way to reconnect the alternate routes with the existing Alliance route beyond the Smiths' lands. Alliance first plotted the partial alternates, as submitted by the Smiths, and subsequently plotted extensions.

In its opening statement, Alliance presented its comparison of the Company's proposed route and the extensions of the Smiths' alternate routes. This comparison is reproduced as Table 3-2.

**Table 3-2**
**Comparison of Routing Considerations Between the**
**Proposed Alliance Route and the Suggested Landowner Routes***

**Landowner:** **Dale and Gwen Smith**
**Legal Locations:** **SW 4-69-7 W6M**
**Pipeline Segment:** **Alliance Mainline - Alberta (KP 196.2 to KP 208.7)**

| Routing Considerations | Alliance Route | Objector Routes | |
|---|---|---|---|
| | | North | South |
| Length (km) | 12.52 | 13.03 | 13.77 |
| Length following existing linear disturbances (km) | 0 | 1.27 (9.7%) | 13.77 (100%) |
| Foreign pipeline crossings | 2 | 2 | 3 |
| Road crossings | 6 | 6 | 3 |
| Railroad crossings | 0 | 0 | 0 |
| Watercourse crossings | 0 | 0 | 0 |
| Clearing required (km) | 7.1 | 6.6 | 11.5 |
| Wet terrain (km) | none | none | 4.4 |
| Other environmental considerations | nil | nil | Wapiti Lateral length reduced 1.3 km |
| Affected parcels of land | 21 | 21 | 21 |
| • new parcels | N/A | 2 | 18 |
| Residences within 250 m | 0 | 0 | 2 |
| Points of Intersection (PI's) | 14 | 20 | 14 |
| Estimated cost to construct** | $15,650,000 | $16,287,500 | $17,212,500 |
| Incremental cost | N/A | $637,500 | $1,562,500 |

* Alternate routes as extended by Alliance

** Alliance's cost figures appearing in the table are based on the Company's estimated cost of construction for the 1067 mm diameter mainline of approximately $1,250 per metre.

### 3.2.6 Environmental and Land Use Matters

*Setting and Landowner Concerns*

As outlined in the section entitled "Nature of Objection", the Smiths stated their concern that the project would destroy all the trees on both the right-of-way and temporary workspace and that this clearing would also increase their safety concerns due to easier access for hunters. They wanted an untouched quarter-section on which to build a retirement home and develop nature trails. The site proposed by the Smiths for their retirement home would be on high ground about 100 m northeast of the existing cabin. With respect to future clearing, it would be necessary to remove enough trees so that the trees would not fall on the house. In addition to clearing for a house yard, the Smiths noted that they would need a septic tank pump-out area to the northeast and a barnyard for their horses. The Smiths stated that the existing cabin is too close to the road allowance and would have to be relocated if a road were constructed on the road allowances that border the west and south sides of their land. They also submitted that the municipal district and the health board require a setback of 40 m (132 feet) from a road allowance.

*Routing Considerations*

The Smiths questioned why the Alliance proposed detailed route could not parallel the existing NOVA pipeline, especially given that one of Alliance's criteria talks about following existing corridors. The Smiths further observed that there is a major corridor along the NOVA pipeline compared to the Cabre/Ulster pipeline right-of-way which is their preferred alternate if the Alliance Pipeline route is to cross their land.

Alliance submitted that, from a general routing standpoint, when it first started selecting a route for its pipeline, several existing pipeline corridors were evaluated. Among these were the Peace and NOVA pipeline routes. The applied-for route parallels the NOVA route east of KP 209. Alliance submitted that, during the early stages of the project, it looked at a route that followed the NOVA pipeline route until it intersected the Peace pipeline route, but that this route was rejected at an early stage because of the additional length associated with this route and the wet areas that would be encountered. Alliance also stated that it did not favour the full re-route following the Peace and NOVA pipelines as it entailed a very significant cost.

Alliance further indicated that a deviation of the Alliance route from the existing pipeline corridors in this area was supported by the Alberta Lands and Forest Service. However, under cross-examination, Alliance stated that it did not have any reason to believe that the Alberta Lands and Forest Service would not provide the necessary approvals for either of the alternates that the Smiths identified.

Alliance submitted that its proposed detailed route is the best for two reasons. Firstly, it is the straightest route and therefore the lowest cost. Secondly, by being on the top of the ridge, the route is the higher and drier route and avoids the wet areas and any associated difficult construction.

In comparing the northern alternate to its proposed detailed route, Alliance indicated that, although less clearing would be required on the northern alternate, its proposed detailed route minimizes the length and area of land that would be disturbed by the construction and operation of the pipeline. Alliance submitted that with the northern alternate there would be additional right-of-way to manage during operation and additional erosion control, seeding, soil disturbance, and reclamation. However, Alliance

acknowledged that these environmental effects are probably not an issue for the areas that have been clear-cut in the vicinity of the Smiths' land.

Alliance further submitted that, if the amount of clearing on the Smiths' land were to be the criterion used to determine which is the better route, its proposed detailed route is to be preferred since it is a shorter route across the Smiths' land.

*Mitigation Measures*

The Smiths stated their preference that the Alliance Pipeline not be routed across their land but noted that, in the event it was, certain measures identified during the hearing could help to address some of their concerns. In the Smiths' view, allowing re-growth would help, but they noted their preference to have the right-of-way put back the way it was prior to construction. The Smiths further noted that, if the pipeline were constructed on their land, they would definitely want any available measures that could be incorporated to ensure that there is not a straight line visible to hunters. In addition, the Smiths noted that, although it is an ugly scene on one's property to have rollback, they would want something like rollback to stop vehicles from entering from either end of the proposed right-of-way across their land.

In light of the value that the Smiths place on forest cover on their land, Alliance committed to allow re-growth to take place on the area that is taken for right-of-way construction purposes except for a 5 m strip over the pipeline. Alliance also stated that the ground cover would be left intact as much as possible to enhance the ability of the aspen, bushes, roses, and other woody material along the right-of-way to grow. Alliance further proposed to reclaim the area with a native seed mix compatible with the local ecoregion.

Alliance further committed that it would accommodate the planting of trees for screening to minimize the visual impact in addition to instituting rollback for access management control. Alliance is also prepared to accommodate incorporating some form of deflection in the route in close proximity to the north/south road allowance to minimize sight lines.

Alliance also observed that, since the Smiths' quarter-section appears to have access both on the west and south sides, the Company might be able to get by with less than 32 m of clearing. Alliance went on to state that additional measures could be discussed with the Smiths.

***Views of the Board***

The Board accepts the position of Alliance that deviating from the NOVA route where it encounters the wet areas south of the Smiths' quarter-section is reasonable from an environmental perspective.

The Smiths clearly identified the value that they place on their quarter-section remaining in a natural state. The Board notes that, while the Smiths intend to retain the quarter-section in a largely natural state, the land would experience some disturbance in order to accommodate their planned retirement home. The Board also notes Alliance's statement that less than 32 m of clearing may be necessary given the access on the west and south sides of the quarter-section. This, together with the fact that the proposed route would require less clearing on the Smiths' land than the northern alternate, makes

the proposed detailed route, in the Board's view, preferable from an environmental perspective.

Alliance has identified several measures, such as the replanting of trees and offsetting the right-of-way, to minimize the visual impact. The Board is of the view that these measures, together with access control measures such as rollback, would substantially address the Smith's concerns regarding hunters accessing their land. In addition, Alliance has noted the potential to reduce the width of its right-of-way and the clearing that would be required. This measure, together with Alliance's commitment to allow vegetation to re-grow except for a 5 m strip, would help to minimize disturbance to, and restore, the forest cover that the Smiths value.

While satisfied with the direction of Alliance's intended mitigation efforts, the Board notes the specifics of those mitigation plans have not been fully developed and discussed with the Smiths. Any order by the Board approving the plans, profiles, and books of reference for the subject lands would therefore include a condition requiring Alliance to use its best efforts to consult with the Smiths for the purpose of developing a mutually acceptable mitigation plan which assesses the potential for narrowing the width of clearing through the Smiths' quarter-section and identifies the measures that would be used to control access and eliminate sight lines at the intersection of the right-of-way with the road allowances bordering the west and south boundaries of the Smiths' quarter-section.

### 3.2.7 Engineering and Safety Matters

The Smiths stated that one of their main concerns with respect to Alliance's proposed routing is the safety aspect of the pipeline's proximity to the proposed site of their future residence.

Alliance submitted that its preferred route is approximately 300 m from the existing cabin and 150 m from the proposed building site. Alliance indicated that one of its routing criteria is to avoid residences, but that the Company does not have a minimum setback requirement. It was stated that this case is not unique as there are many residences along the route that are closer than 150 m.

***Views of the Board***

The general design and safety of the Alliance Pipeline were addressed during the certificate hearing. In the Board's view, the proximity of Alliance's proposed route to the Smiths' existing cabin and proposed building site is not unusual and does not present a safety concern. Apart from the issue of hunter access already discussed under "Environmental and Land Use Matters", no other safety matters were raised.

### 3.2.8 Costs

As indicated by Table 3-2, Alliance estimated the incremental cost of the Smiths' northern and southern alternates to be $637,500 and $1,562,500, respectively. Alliance stated during cross-examination that these figures were calculated by multiplying the additional length associated with each alternate by a unit cost of $1,250 per metre for the 1067 mm diameter mainline.

Alliance acknowledged that the Smiths' southern alternate would lead to a cost savings of about $300,000 on the Wapiti Lateral, due to that lateral being shortened by 1.3 km. Alliance went on to state, however, that these cost savings would be balanced out by the extra cost associated with swamp weights for the southern alternate. Alliance also acknowledged that the incremental cost of the northern alternate could be reduced by about $15,000 due to the lesser amount of clearing that would be required.

The Smiths argued that Alliance's incremental cost figures were nothing more than an average calculation times the number of metres, and that the numbers do not have any background to them. They further argued that the best possible route is not necessarily the cheapest or the shortest, and that the intangibles, such as landowner concerns, have been given short shrift.

The Smiths also questioned how significant the incremental costs would be if the costs of the detailed route hearing had been factored in, or if they were compared to the costs of the overall Alliance Pipeline Project.

Alliance argued that its cost estimates are reliable and stand uncontradicted, and that the cost savings associated with its proposed route would be substantial. Alliance also submitted that regulatory agencies such as the Board with a public interest mandate should have regard for economic efficiency issues.

***Views of the Board***

In the Board's view, incremental cost is a valid routing consideration which has to be weighed against other factors, including landowner concerns, in determining the best possible route. The Board finds, in this case, that the incremental cost of either of the two alternate routes would be significant.

**Decision**

**Having considered the environmental and land use, engineering and safety, and cost matters described above, the Board finds, on balance, that the route proposed by Alliance is the best possible detailed route for the pipeline in this case and finds that Alliance has committed to the most appropriate methods and timing of construction, subject to compliance with the following conditions:**

**1. (a) Alliance shall use its best efforts to consult with the Smiths for the purpose of developing a mutually acceptable mitigation plan which:**

**(i) assesses the potential for narrowing the width of clearing through the Smiths' quarter-section; and**

**(ii) identifies the measures that would be used to control access and eliminate sight lines at the intersection of the right-of-way with the road allowances bordering the west and south boundaries of the Smiths' quarter-section.**

**(b) Alliance shall file the results of the consultations and the mitigation plan referred to in paragraph (a) with the Board prior to construction.**

**Any order of the Board approving the plans, profiles, and books of reference for the subject lands will also include a condition requiring Alliance to fulfill all of the commitments made by the Company in the course of this detailed route proceeding. The Smiths are entitled to seek a remedy from the Board if any of the commitments are not being fulfilled.**

**If a commitment cannot be fulfilled at any time, Alliance will be required to provide to the Board, and to the Smiths, a written explanation as to why the commitment cannot be fulfilled together with a description of the measures that the Company proposes to otherwise take to address the concerns of the Smiths. If dissatisfied with the explanation and/or the alternate measures being proposed, the Smiths may file a complaint with the Board and seek an appropriate remedy.**

| R.J. Harrison | D. Valiela | J.S. Bulger |
|---|---|---|
| Presiding Member | Member | Member |

Calgary, Alberta
Dated 20 July 1999

## 3.3 Decisions on Route Objections by Don & Linda Liland, Franklin & Joan Moller, Brian & Teresa Fast, and Peter & Levke Eggers Heard by the Board on 1 & 2 June 1999 in Grande Prairie, Alberta

### 3.3.1 Introduction and Background

On 3 December 1998, the National Energy Board ("Board") issued a certificate of public convenience and necessity approving the construction and operation of the Alliance Pipeline Project in Canada. This followed a 77-day public hearing and a comprehensive study on potential environmental effects. The Board also approved the general route of the pipeline at that time.

Alliance Pipeline Ltd. ("Alliance" or "the Company") subsequently applied to the Board for approval of plans showing the proposed detailed route of the pipeline in Canada. As required by section 34 of the *National Energy Board Act* ("*NEB Act*"), Alliance served notices on owners of lands that it proposed to acquire, and published notices in publications serving the areas in which the lands are situated. Landowners and other interested persons opposing the detailed routing of the Alliance Pipeline were given 30 days in which to file a written statement of opposition with the Board.

The Board is conducting public hearings in response to the route objections. As prescribed by section 36 of the *NEB Act*, the issues for the detailed route hearings are limited to (i) the best possible detailed route of the pipeline and (ii) the most appropriate methods and timing of constructing the pipeline. The Board

is not reconsidering issues that were addressed during the certificate hearing, such as the need for the pipeline and its general route. Compensation for land use is also outside the scope of the detailed route hearings.

This decision document pertains to the statements of opposition that were filed on 18 January 1999 by (i) Don and Linda Liland, (ii) Franklin and Joan Moller, (iii) Brian and Teresa Fast, and (iv) Peter and Levke Eggers. A combined hearing into these objections was held on 1 and 2 June 1999 in Grande Prairie, Alberta, with Mr. Liland, Mr. and Mrs. Moller, Mr. Fast, Mr. Eggers, and Alliance participating.[1] The landowners were represented by Mr. J. Darryl Carter, Q.C., of the law firm of Carter, Lock and Horrigan. Alliance was represented by Mr. Richard Neufeld and Mr. Alex Ross of the law firm of Fraser Milner.

Alliance plans to construct and operate the Canadian portion of a natural gas pipeline system from northeastern British Columbia and northwestern Alberta, across Saskatchewan, to the midwest United States. The Canadian portion of the system will consist of approximately 2300 kilometres ("km") of pipeline ranging up to 1067 millimetres ("mm") in diameter and other facilities, including seven mainline compressor stations. Construction of the Teepee Creek and Spirit River Laterals across the Moller, Liland, Fast, and Eggers lands is scheduled to begin in the summer of 2000, while construction of the mainline across the Fast lands is scheduled to begin in the fall of 1999. The pipeline is scheduled to be in service in the second half of 2000.

## 3.3.2 THE LILAND OBJECTION

### 3.3.2.1 Proposed Detailed Route

The Lilands own NE 25-73-8 W6M and NW 30-73-7 W6M, located approximately 21 km northwest of Grande Prairie. The proposed 219 mm diameter Teepee Creek Lateral runs in an easterly direction, bisecting both of the Liland's quarter-sections of land, between Kilometre Posts ("KPs") 9 and 10.7. The proposed route crosses Niobe Creek at approximately KP 11 and a tributary of that creek at approximately KP 11.4. The proposed route also traverses an area identified as bush at approximately KP 9.

### 3.3.2.2 Alliance Routing Rationale

The proposed Teepee Creek Lateral crosses the Liland lands approximately 36 km downstream of the AB 21 Teepee Creek/Talisman Meter Station site and approximately 9 km upstream of the Alliance mainline tie-in point. The Teepee Creek Lateral runs from the Teepee Creek/Talisman Meter Station to the mainline and takes a relatively direct route between the two points.

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[1] The hearing record includes a map showing the Liland, Moller, Fast and Eggers lands in relation to Alliance's proposed detailed route and the alternate routes suggested by the Lilands and the Mollers (Drawing Nos. AP-9950-2973, AP-9950-2974, AP-9950-2970 to 2972 inclusive, and AP-9950-2969 respectively, filed as Exhibit B-18); the wall-size version of these maps, Exhibits B-31, B-30, B-33 to B-35 inclusive, and B-32, were marked during the hearing to denote key features.

The proposed route also passes to the south of Gummer Lake (upstream of the Liland property), and to the north of Henderson Lake (downstream of the Liland property) and an unnamed lake at KP 19. The proposed route also avoids the wet area located in E½ 25-73-8 W6M.

#### 3.3.2.3 Nature of Objection

In their statement of objection, the Lilands opposed the proposed route because (i) it would cut a diagonal through their land which, they submitted, would have an unnecessary detrimental impact on the present and future use of their land, and (ii) the proposed route would be closer to their family's long-time yard site than a route along the northern boundary.

The Lilands also submitted that the proposed route would have an impact on their farming practices, both during construction and for years into the future, due to soil settling and other problems. The Lilands indicated that they own other fields that have been dissected by pipelines which have restricted their access.

The Lilands noted that their land is in demand for country residential purposes and that the most desirable building spot is exactly where the proposed pipeline route is located.

The Alliance Pipeline would be the first pipeline on this particular property and the Lilands expressed concern that proponents of future pipelines may want to follow the same alignment.

#### 3.3.2.4 Alternate Route

The Lilands proposed an alternate route that would run in an easterly direction, following the northern property boundaries of NE 25-73-8 W6M and NW 30-73-7 W6M.

The suggested alternate route did not extend to connect to the proposed Alliance route. Alliance indicated that, for comparison purposes, it was necessary to find a way to reconnect the alternate route with the existing Alliance route, beyond the Lilands' lands. Alliance first plotted the partial alternate, as submitted by the Lilands, and subsequently plotted extensions.

In its opening statement, Alliance presented its comparison of the Company's proposed route and the extensions of the alternate route proposed by the Lilands. This comparison is reproduced as Table 3-3:

**Table 3-3**
**Comparison of Routing Considerations Between the Proposed Alliance Route and the Suggested Landowner Route***

**Landowner:** **Don and Linda Liland**
**Legal Locations:** **NE 25-73-8 W6M & NW 30-73-7 W6M**
**Pipeline Segment:** **Teepee Creek Lateral - Alberta (KP 8.1 to KP 13.0)**

| Routing Considerations | Alliance Route | Objector Route |
|---|---|---|
| Length (km) | 4.89 | 5.1 |
| Length following existing linear disturbances | 0 | 0 |
| Foreign pipeline crossings | 0 | 0 |
| Road crossings | 3 | 3 |
| Railroad crossings | 0 | 0 |
| Watercourse crossings | 2 | 2 |
| Clearing required (m) | 225 | 390 |
| Wet terrain | 0 | 0 |
| Other environmental considerations | Nil | Nil |
| Affected parcels of land | 7 | 7 |
| • new parcels | N/A | 0 |
| Residences within 250 m | 0 | 0 |
| Estimated cost to construct** | $855,750 | $898,000 |
| Incremental cost | N/A | $42,250 |

* Alternate route as extended by Alliance.
** Alliance's cost figures appearing in the table are based on the Company's estimated cost of construction for the Teepee Creek Lateral of approximately $175 per metre.

### 3.3.2.5 Environmental and Land Use Matters

The Liland property is predominantly flat agricultural land in the Beaverlodge Plain natural region. Niobe Creek is a significant natural feature which flows through the northeast corner of the Liland property. There are also two remnant vegetation areas which are not under cultivation, in each of the northwest and southwest corners of the property.

The Lilands identified a preferred routing along their northern property line, as an alternate to Alliance's proposed route which runs through the middle of the quarter-sections.

Alliance indicated that it has not been a routing criterion to follow property boundaries. Alliance also indicated that incorporating and rigidly following such a criterion would have added enormously to the length of the project, with consequent increases in surface disturbance, environmental impact, and capital cost. Alliance also submitted that following property boundaries would conflict with existing and future development.

The Lilands submitted that their preferred routing could easily avoid a water crossing of a tributary to Niobe Creek which the Alliance alignment crosses in the northeast of Section 30. Alliance indicated that there would be an increase in clearing required along the Lilands' preferred route, but noted that the additional clearing requirements could be reduced by avoiding the crossing of the tributary to Niobe Creek.

Alliance submitted that there would be a slight increase in length to construct the Lilands' alternate route. The Lilands suggested that any additional length could be avoided if the Alliance routing continued along the boundary for some distance past their property as the route heads back north towards the Teepee Creek Gas Plant.

***Views of the Board***

The Board has considered the environmental factors and data used by Alliance and the Lilands in comparing routing considerations for the proposed and alternate routes. The Board is of the view that, although the alternate route identified by the Lilands is slightly longer, there are no significant environmental differences between the proposed detailed route of Alliance and the alternate route identified by the Lilands.

The Board is of the view that, in this case, following property boundaries would not add significantly to the length of the pipeline and there is no evidence to indicate that doing so would conflict with existing and future use of the Lilands' land.

### 3.3.2.6 Engineering and Safety Matters

No site-specific engineering or safety issues were raised by the Lilands.

### 3.3.2.7 Costs

Alliance argued that the alternate route following the property lines is not a preferred route and that it would cost an estimated $42,250 more to build. Alliance submitted that such an incremental cost is significant to them. Alliance also submitted that regulatory agencies, such as the Board, with a public interest mandate should have regard for economic efficiency issues.

The Lilands noted that Alliance's proposed route would parallel part of the NOVA Gas Transmission Ltd.[1] pipeline, which is not even at capacity, and questioned why there should be more impact on landowners to build another pipeline that would duplicate existing facilities. While they agreed that the public interest should be taken into consideration, they submitted that part of the public interest consideration should include the future use of land. Overall, they argued that, when the cost of the duplication of facilities and the public interest consideration are factored in, $42,250 is not that much.

***Views of the Board***

In the Board's view, incremental cost is a valid routing concern which must be weighed along with all the other factors, including landowner concerns, in determining the best possible detailed route.

The weight to be given to cost, or any other factor, is a matter to be decided by the Board in the reasonable exercise of its discretion, in the circumstances of each case. A relatively small amount of incremental cost could, when balanced with all other factors, result in the balance favouring an alternate route. Conversely, a larger amount may be

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[1] NOVA Gas Transmission Ltd. is now a wholly-owned subsidiary of TransCanada PipeLines Limited.

outweighed by other factors. Consequently, there is no fixed amount that would automatically tip the balance either way in every case.

In balancing the factors in this case, the Board finds that the landowner concerns, in combination with the other factors considered, outweigh the incremental costs of the alternate route as suggested by the Lilands.

#### 3.3.2.8 Compensation

During the hearing, the matter of compensation was raised by the parties.

***Views of the Board***

As the Board stated in its Directions on Procedure for these hearings, it has no authority to settle compensation matters. The Board reminds parties that, for resolution of compensation disputes, they have the right under the *NEB Act* to apply to the Minister of Natural Resources Canada for negotiation or binding arbitration.[1]

**Decision**

**Having considered all of the environmental and land use, engineering and safety, and cost matters described above, the Board finds that, on balance, the route proposed by Alliance has not been demonstrated to be the best possible route for the pipeline in this case. Therefore, the Board has decided to deny the approval of the detailed route of Alliance as currently applied for across the Lilands' lands.**

### 3.3.3 MOLLER OBJECTION

#### 3.3.3.1 Proposed Detailed Route

The Mollers own SE 32-73-5 W6M and NW 33-73-5 W6M, located approximately 3 km to the northeast of the Town of Sexsmith and 18 km north of Grande Prairie. The proposed 219 mm diameter Teepee Creek Lateral runs in a northeasterly direction, diagonally bisecting SE 32-73-5 W6M and crossing the southeast tip of NW 33-73-5 W6M.

#### 3.3.3.2 Alliance Routing Rationale

The proposed Teepee Creek Lateral crosses the Moller lands approximately 14 km downstream of the AB 21 Teepee Creek/Talisman Meter Station site and approximately 30 km upstream of the Alliance mainline tie-in point. The Teepee Creek Lateral runs from the Teepee Creek/Talisman Meter Station to the Alliance mainline, taking a relatively direct route between the two points.

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[1] For further information, persons may contact the Natural Gas Division of Natural Resources Canada by telephone at (613) 992-9612, by facsimile at (613) 995-1913, or by mail to 580 Booth Street, Ottawa, Ontario, K1A 0E4.

The proposed route passes to the north of the Town of Sexsmith and avoids the wetlands in the southeast of Section 32. Upstream of the Moller lands the proposed route avoids the sloughs located in the northeast of Section 35 and the southwest of Section 2 (Township 74), and the residences located in the southeast of Section 34.

#### 3.3.3.3 Nature of Objection

In their statement of objection, the Mollers opposed the proposed route because it would cut a diagonal through their land which, they believed, would have an unnecessary detrimental impact on the present and future use of their land. The Mollers submitted that the route should follow the property lines.

#### 3.3.3.4 Alternate Routes

The Mollers initially proposed two alternate routes. The first alternate route would run in an easterly direction, following the northern property boundaries of SE 32-73-5 W6M and SW 33-73-5 W6M. The second alternate route would also run in an easterly direction, following the northern property boundary of NW 33-73-5 W6M.

Alliance indicated that, in its view, the second alternate route was not a logical route. This alternate would run parallel to a secondary highway and Alliance submitted that, for a variety of reasons, it would be much less preferable than a route in the more immediate vicinity of Alliance's proposed route. Alliance submitted that there would be a much higher potential for future development of residences and lots, and subdivisions along the pipeline route if it were to parallel a highway. During the hearing, the Mollers indicated that they no longer advocated the second alternate route.

The Mollers' preferred alternate route did not extend to connect to the proposed Alliance route. Alliance indicated that, for comparison purposes, it was necessary to find a way to reconnect the alternate route with the existing Alliance route, beyond the Mollers' lands. Alliance first plotted the partial alternate, as drawn by the Mollers and subsequently plotted extensions to the alternate.

In its opening statement, Alliance presented its comparison of the Company's proposed route and the extensions of the alternate route proposed by the Mollers. This comparison is reproduced as Table 3-4:

**Table 3-4**
**Comparison of Routing Considerations Between the Proposed Alliance Route and the Suggested Landowner Route***

**Landowner:** **Franklin and Joan Moller**
**Legal Locations:** **SE 32-73-5 W6M**
**Pipeline Segment:** **Teepee Creek Lateral (KP 30.3 to KP 33.7)**

| Routing Considerations | Alliance Route | Objector Route |
|---|---|---|
| Length (km) | 3.1 | 3.1 |
| Length following existing linear disturbances | 0 | 0 |
| Foreign pipeline crossings | 0 | 0 |
| Road crossings | 2 | 2 |
| Railroad crossings | 0 | 0 |
| Watercourse crossings | 0 | 0 |
| Clearing required (km) | 0.18 | 0.53 |
| Wet terrain (km) | Nil | 0.3 |
| Other environmental considerations | Nil | large wetland in LSD 6/7-32; historical site in LSD 7-32 |
| Affected parcels of land | 6 | 6 |
| • new parcels | N/A | 0 |
| Nearest residence (m) | 350 | 475 |
| Estimated cost to construct** | $542,500 | $622,500 |
| Incremental cost | N/A | $80,000 |

* Alternate route as extended by Alliance.
** Alliance's cost figures appearing in the table are based on the Company's estimated cost of construction for the Teepee Creek Lateral of approximately $175 per metre.

### 3.3.3.5 Environmental and Land Use Matters

The Moller lands lie within the Peace River Parkland natural region which is characterized by gently rolling terrain. Remnant native vegetation is dominated by balsam poplar, frequently occurring with aspen. In the vicinity of the Moller lands, the landscape is largely agricultural, interspersed with creeks, their tributaries, and wetland areas.

The Mollers indicated that their preference is for a route that would run as close as possible to the property line on the north boundary of the southeast quarter of Section 32. The Mollers stated that Alliance's proposed detailed route would effectively cut their field into four pieces, affecting present farming practices and future development of the quarter-section.

Alliance indicated that it has not been a routing criterion to follow property boundaries. Alliance submitted that incorporating and rigidly following such a criterion would have added enormously to the length of the project, with consequent increases in surface disturbance, environmental impact and capital cost. Alliance also submitted that following property boundaries would conflict with existing and future development.

Alliance stated that there would be more constructability issues with the Mollers' alternate route than the proposed Alliance routing, largely related to the wetland in the northwest corner of Section 32. Alliance

described the wetland as a large area, dominated by cattails, with a ring of aspen woodland around the whole complex. Alliance also stated that, whereas reclamation of a cultivated field within one year is very good, residual effects for a wetland would last a lot longer.

The Mollers noted that there is a distance of 9 or 10 m between the northern edge of the wetland and the fence line and that the wetland is triangular in shape, tapering back on either side from the northernmost point. The Mollers stated that the location and configuration of the wetland would minimize the crossing distance and related construction concerns with routing through that area. The Mollers also stated that the wetland is on the highest part of the field and that everything drains to the south and slightly east from that point. Alliance indicated that there may be an opportunity to locate the pipeline closer to the fence line which might provide a slightly drier site out of the cattails, but that in all likelihood more clearing would be involved.

Alliance stated that the soils in the Grande Prairie area are fairly heavy clays, which traditionally have had problems with drainage, and can exhibit surprising erosion potential even on fairly moderate slopes. The Mollers expressed concern regarding the potential for erosion along Alliance's proposed detailed route, given the nature of the soils, the drainage pattern on their property, and the evidence of existing erosion where the road allowance crosses the creek at approximately KP 32.8, which is also the proposed Alliance Pipeline crossing location. The Mollers indicated that the crossing of that same watercourse on their proposed alternate route would be on fairly flat land and at a point where the watercourse has little flow.

The Mollers also indicated that their proposed route would allow the avoidance of the bush and gully area in the middle of the southwest quarter of Section 32, which is intersected by Alliance's proposed route.

The Mollers raised concerns regarding the long-term impact of the pipeline on their future land use. They stated that they had no idea of what the future holds for this area, which is developing at a rapid pace and submitted that there may be a circumstance in the future where other development is required on the quarter-section that would be affected by the pipeline. They expressed concern that, in that case, they would not have access to appropriate compensation. The Mollers also indicated that, due to the Highway 2 twinning project, they are being moved from their original farmstead and are looking for a new place to live. The proposed Alliance Pipeline route runs through their primary quarter-section, where they are proposing to relocate. Alliance stated that it was not aware of the Mollers' concern that the pipeline would cause detrimental impact on their present and future land use.

***Views of the Board***

In comparing routing considerations for the proposed and alternate routes, the Board has considered the environmental factors (including the large wetland, drainage, and the potential for soil erosion) and data used by Alliance and the Mollers during the course of the proceeding. The Board is of the view that other routing alignments, such as the Mollers' proposed alternate through their property, may be as good or better from an environmental point of view than Alliance's proposed route.

The Board is of the view that, in this case, following the property boundaries would not add significantly to the length of the pipeline and there is no evidence to establish that doing so would conflict with existing and future land use.

#### 3.3.3.6 Engineering and Safety Matters

No site-specific engineering or safety issues were raised by the Mollers.

#### 3.3.3.7 Costs

The Mollers questioned the costs presented by Alliance in Table 3-4 comparing the Company's proposed route and their alternate route. The Mollers requested that Alliance provide the back-up material to substantiate the $80,000 incremental cost estimate for their alternate route.

Alliance provided further material to back up the calculation of the incremental cost of the Mollers' alternate route. The response broke the $80,000 incremental cost into $7,500 for engineering, $7,500 for surveying, $5,000 for clearing, $15,000 for bolt-on weights, and an increase of $45,000 in "Unit Lay through Wetland."

In a letter dated 8 June 1999, the Mollers responded to the cost breakdown and indicated that they did not agree that it would be necessary to spend an additional $5,000 on clearing, or an additional $15,000 on weights to run the line along the extreme north side of their property. In another letter dated 10 June 1999, the Mollers indicated that they did not understand the term "Increase in Unit Lay through Wetland." The Mollers also submitted that, as far as clearing is concerned, one man could clear through the area in an afternoon with a chainsaw. Mr. Moller further submitted that he would drain the area at his own expense.

Alliance argued that the alternate route following the property lines is not a preferred route and that it would cost $80,000 more to build. Alliance submitted that such an incremental cost is significant to them. Alliance also submitted that regulatory agencies, such as the Board, with a public interest mandate should have regard for economic efficiency issues.

The Mollers noted that Alliance's proposed route would parallel part of the NOVA Gas Transmission Ltd.[2] pipeline, which is not even at capacity, and questioned why there should be further impact on landowners to build another pipeline that would duplicate existing facilities. While they agreed that the public interest should be taken into consideration, they felt that part of the public interest consideration should include the future use of land. Overall, they argued that, when the cost of the duplication of facilities and the public interest consideration are factored in, $80,000 is not that much.

***Views of the Board***

In the Board's view, incremental cost is a valid routing concern which must be weighed along with all the other factors, including landowner concerns, in determining the best possible detailed route.

The weight to be given to cost, or any other factor, is a matter to be decided by the Board in the reasonable exercise of its discretion, in the circumstances of each case. A relatively small amount of incremental cost could, when balanced with all other factors,

result in the balance favouring an alternate route. Conversely, a larger amount may be outweighed by other factors. Consequently, there is no fixed amount that would automatically tip the balance either way in every case.

In balancing the factors in this case, the Board finds that the landowner concerns, in combination with the other factors considered, outweigh the incremental costs of the alternate route suggested by the Mollers, whether or not the savings suggested by Mr. Moller could be achieved.

#### 3.3.3.8 Compensation

During the hearing the matter of compensation was raised.

***Views of the Board***

As the Board stated in its Directions on Procedure for these hearings, it has no authority to settle compensation matters. The Board reminds parties that, for resolution of compensation disputes, they have the right under the *NEB Act* to apply to the Minister of Natural Resources Canada for negotiation or binding arbitration.[3]

**Decision**

**Having considered all of the environmental and land use, engineering and safety, and cost matters described above, the Board finds that, on balance, the route proposed by Alliance has not been demonstrated to be the best possible route for the pipeline in this case. Therefore, the Board has decided to deny the approval of the detailed route of Alliance as currently applied for across the Mollers' lands.**

### 3.3.4 EGGERS AND FAST OBJECTIONS

#### 3.3.4.1 Proposed Detailed Routes

*The Fasts*

The Fasts own the following four quarter-sections of land: NE 25-73-9 W6M (proposed to be crossed by Alliance's proposed 1067 mm diameter mainline), SW and SE 27-73-8 W6M (proposed to be crossed by Alliance's proposed 219 mm diameter Teepee Creek Lateral), and SW 33-73-8 W6M (proposed to be crossed by Alliance's proposed 406 mm diameter Spirit River Lateral).

The proposed Alliance mainline runs in a southeasterly direction, diagonally bisecting NE 25-73-9 W6M between KPs 149.2 and 150.1, approximately 30 km northwest of Grande Prairie.

The proposed Teepee Creek Lateral runs in an easterly direction following the northern property boundary of S½ 27-73-8 W6M, between KPs 4.9 and 6.2. These lands are located approximately 25 km northwest of Grande Prairie.

The proposed Spirit River Lateral runs in a northeasterly direction, diagonally crossing the northwest corner of SW 33-73-8 W6M between KPs 3.9 and 4.4, approximately 27 km northwest of Grande Prairie. The proposed Spirit River Lateral route parallels a NOVA Gas Transmission Ltd. ("NOVA")[2] pipeline and crosses the Bear River immediately to the north of SW 33-73-8 W6M.

*The Eggers*

The Eggers own NW 13-74-8 W6M and SW 24-74-8 W6M, located approximately 27 km northwest of Grande Prairie. The proposed Spirit River Lateral runs in a northeasterly direction, diagonally bisecting NW 13-74-8 W6M and crossing the southeast corner of SW 24-74-8 W6M, between KPs 11.4 and 12.8. The proposed Spirit River Lateral parallels a NOVA pipeline.

**3.3.4.2 Alliance Routing Rationale**

*The Fasts*

(i) Mainline

The Fast lands identified as NE 25-73-9 W6M are situated approximately 0.5 km upstream of the Wembley Junction (where the Hythe, Spirit River and Teepee Creek Laterals tie into the Alliance mainline), and approximately 2 km upstream of the point at which the Wembley Lateral ties into the Alliance mainline.

Upstream of this Fast property, from approximately KPs 90.4 to 149.2, the Alliance mainline parallels and abuts the north side of the existing Peace Pipe Line ("Peace")/NOVA corridor. In this general area, the existing Peace/NOVA corridor provides a suitable and established crossing location of the Bear River, and provides a suitable route between La Glace Lake (to the north) and Anderson Lake (to the south).

The Alliance mainline deviates from the existing Peace/NOVA corridor at KP 149.2 in order to avoid the residence in the southeast corner of this Fast property.

(ii) Teepee Creek Lateral

The proposed Teepee Creek Lateral crosses the Fast lands identified as S½ 27-73-8 W6M approximately 41 km downstream of the AB 21 Teepee Creek/Talisman Meter Station site and 5 km upstream of the Alliance mainline tie-in point at the Wembley Junction. The Teepee Creek Lateral runs from the Teepee Creek/Talisman Meter Station to the mainline and takes a relatively direct route between these two control points.

Upstream of this Fast property, the proposed Alliance route passes to the north of Henderson Lake and the wet area located on the west half of Section 25. The proposed route also passes in close proximity to the northern boundary of the property, and provides a suitable location for the crossing of the Bear River.

(iii) Spirit River Lateral

The Fast lands identified as SW 33-73-8 W6M are located approximately 4 km upstream of the Wembley Junction.

The proposed routing for the Spirit River Lateral parallels an existing NOVA right-of-way from just upstream of the Wembley Junction (at KP 1.8 on the Spirit River Lateral) to the AB 23 Sexsmith-AEC Meter Station and gas plant sites. This alignment provides a relatively direct route between those two control points.

This Fast property is located immediately downstream of the proposed Bear River crossing location.

*The Eggers*

The Eggers lands are located approximately 7 km downstream from the AB 23 Sexsmith-AEC Meter Station and gas plant sites and 12 km upstream from the Wembley Junction (where the Spirit River, Teepee Creek, and Hythe Laterals tie into the Alliance mainline).

The proposed routing for the Spirit River Lateral generally parallels and abuts the northwest boundary of an existing NOVA right-of-way which provides a relatively direct connection of the Sexsmith-AEC Meter Station site with the Alliance mainline, while avoiding residences and unnecessary disturbance of environmental features.

**3.3.4.3 Nature of Objections**

*The Fasts*

In their statement of objection, the Fasts opposed the proposed route because (i) the proposed mainline and Spirit River Lateral would cut a diagonal through their lands which, they submitted, would have an unnecessary detrimental impact on the present and future use of their lands, and (ii) the proposed mainline is in addition (but not parallel) to a number of existing NOVA pipelines which, the Fasts believe, would impact their lands synergistically. The Fasts submitted that the proposed route would create a sterilized area between the pipelines.

Mr. Fast did not seek to re-route the proposed Alliance Pipeline on his lands. Mr. Fast stated that, if he had a choice, he would ask to have the pipeline placed along the edge of a quarter section. However, in this situation, he decided that it was best to have the Alliance Pipeline routed parallel to the existing pipeline.

The Fasts questioned the adequacy of the number of Board inspectors that would be involved with inspection of the pipeline construction across their property and whether the powers of these inspectors would be sufficient.

The Fasts submitted that there should be an inspector, independent of Alliance, to oversee construction practices. In their view, such an inspector should have the power to stop construction in adverse conditions on the basis of specific, objective criteria.

The Fasts also expressed serious concern with respect to soil heating because they have experienced problems over the existing NOVA pipeline and gas carried in Alliance's lateral would come from the same source.

The Fasts initially sought a re-route of the Teepee Creek Lateral. However, Alliance agreed to directionally drill the Bear River. With such a commitment by Alliance, Mr. Fast acknowledged that he no longer had a reason to seek to re-route the Teepee Creek Lateral.

*The Eggers*

In their statement of objection, the Eggers opposed the proposed route for several reasons. Firstly, the proposed alignment would cut through their land on a diagonal, which the Eggers submitted would have an unnecessary detrimental impact on the future use of their land. Secondly, the proposed route parallels an existing NOVA pipeline. In their submission, the installation of the NOVA pipeline created serious drainage, erosion, and soil heating problems which must be avoided by Alliance. The Eggers indicated that, if Alliance's route parallels the existing NOVA pipeline, they would be impacted synergistically. The Eggers also stated that a right-of-way at least as wide as the 25 m NOVA permanent right-of-way would be required to minimize damage during construction.

During the hearing the Eggers did not seek to re-route the Alliance Pipeline, though they did observe that, if a pipeline was routed along the edge of a property and there was a problem, the affected area could at least be used differently from the remainder of the field.

The Eggers shared the Fasts' concerns regarding soil heating and inspection. The Eggers also indicated that, in their opinion, the best time for construction would be in the winter when the ground is frozen and no topsoil stripping of the right-of-way is required.

**3.3.4.4 Alternate Routes**

Neither the Fasts nor the Eggers proposed alternate routes. The Fasts stated that moving the pipeline and associated problems to their neighbours' land was not an option.

**3.3.4.5 Environmental Matters and Agricultural Practices**

The Eggers and Fasts raised concerns related to ensuring the use of proper construction procedures and methods on their lands.

*Soil Handling*

In his objection, Mr. Eggers noted that one option to protect soil would be to utilize winter construction. During the hearing, Mr. Eggers clarified that his concern is not so much with whether it is winter or summer construction, but rather with the soil surface, compaction, and saving the topsoil.

With respect to construction procedures, Mr. Fast indicated that Alliance should have (i) a detailed construction plan, (ii) an independent soils specialist at the construction site with specific knowledge of the soils in the area and power to stop construction, and (iii) a strong monitoring and inspection plan. Both landowners indicated that the independent soils specialist should have the ability to stop

construction if proper procedures were not being followed. Mr. Fast submitted that these provisions were necessary to protect soil and reduce the potential for problems resulting from poor or inappropriate construction practices.

By way of background, Alliance stated that the soils in the Grande Prairie area are fairly heavy clay soils that traditionally have problems with drainage, are susceptible to compaction and rutting, and often have a surprising expansion factor. The Company also noted that the area is characterized by fairly wet springs, soils which tend to dry out late, and a cool climate, which does not allow the soils to dry out quickly. The possibility of September being a wet month was also raised. Alliance submitted that, in the event wet conditions were encountered, it would implement the shutdown procedures contained in its Environmental Plans. Alliance also submitted that the soils in the Grande Prairie area take quite a long time to settle and that it is common to leave the soils until later in the summer for reclamation. Alliance further submitted that, if the trench were left to settle, it would not be necessary to crown as much subsoil over the trench and more subsoil could be placed back into the trench without having a hidden or a subsoil ridge underneath the topsoil.

Alliance indicated that the Albright soils on the Eggers' lands, where the proposed detailed route crosses a sideslope, have been identified as having a moderate erosion potential. Alliance also noted that, because this is a cultivated field, there is not a lot it could do as it has to maintain the existing profile of the land and noted the importance of being aware of the issue and the possibility that it may have to propose special mitigation measures depending on the seasonal conditions.

With previous pipelines, Mr. Fast has encountered slumping along the pipeline and at areas excavated to bore road crossings. This interfered with farming operations, as he was unable to cross these areas. He also noted that the contour of the soil had changed and that there had been admixing. Mr. Fast submitted that, with each additional pipeline, there is a cumulative effect with extra compaction and admixing with the affected areas of his land being rendered of little value for agricultural purposes. He further submitted that it is hard to find any topsoil remaining in these areas. Mr. Fast observed that, when working parallel to the existing rights-of-way, his tractor lugs down and noted that when his neighbour encountered the rights-of-way at a right angle with his tractor and disk it was like he hit a "brick wall." Mr. Fast attributed this hardness of the ground to poor or undesirable construction practices. Mr. Eggers also indicated that, because of severe compaction and the associated impact on water movement, equipment is getting stuck in his fields resulting in a significant time loss.

Alliance noted that it provided copies of its Environmental Plans to the Board and landowners in addition to its detailed environmental inspection plan which details names and qualifications of its inspectors. Alliance submitted that it believes that most of the problems with the other pipelines in the area have been anticipated and measures have been built into its Environmental Plans from the beginning. Alliance further submitted that its soil scientist has examined the problems in more detail. It noted that soil issues were addressed in the certificate hearing and referred to the Board-imposed requirements for construction plans, requirements for soils specialists, and criteria for work stoppage.

*Soil Heating*

Mr. Eggers' concerns have arisen because of the experience he has had with previous pipeline construction and, in particular, the heat effects of the NOVA pipeline which Alliance is proposing to

parallel on his land. He indicated that he utilizes minimal till farming practices and noted that in the spring, along the existing NOVA pipeline, the stubble has decayed prematurely and has no remaining capacity to hold moisture, resulting in erosion along the pipeline. Another problem he identified was persistent weeds that are already growing on the right-of-way in March when the snow cover is opened over the heated pipeline. Mr. Eggers submitted that the result is that his field is divided into two parcels and he cannot crop the way he would normally crop. He further noted, with respect to the effect on his operations, that it is not just the strip through the middle but his whole farming practice that is affected and that the variance with the crop along the pipeline affects the overall quality of the crop harvested.

Mr. Eggers submitted that based on his experience with pipeline construction he has always looked for problems with soil due to admixing, but it took a long time to determine that it was a heat problem with the NOVA pipeline. The problem was not acknowledged by NOVA until last year. Mr. Eggers submitted that the many problems caused by heating have actually made the soil disturbance a minor problem and stated that he is of the view that the only real solution to the heat problem is cooling the gas.

Alliance submitted that its pipeline will have less impact on soil heating than the existing NOVA pipeline as (i) the Alliance Pipeline will have a smaller flow, (ii) the gas will only enter the Alliance Pipeline from the Sexsmith Gas Plant, one of three gas plants tied into the NOVA pipeline, and will flow at a cooler temperature than at least one of the three plants feeding into the NOVA pipeline, and (iii) the Alliance Pipeline will be a 406 mm (16 inch) outside diameter pipeline, and thus is smaller that the 508 mm (20 inch) outside diameter NOVA pipeline and will be buried deeper than the NOVA pipeline. Alliance submitted that, because of these factors, the Alliance Pipeline will not carry heat as far as the NOVA pipeline. Alliance further submitted that, when the same or similar amounts of gas currently being transported on the NOVA pipeline are split between the two pipelines, the gas would tend to have slower velocities, resulting in less ability to carry the heat along the pipelines.

As a result of the heat, the affected soils would tend to be drier which could also impact crops. Alliance acknowledged the potential to lose the affected crop due to it maturing early. In quantifying the effects of soil heating, Alliance submitted that it would expect a range of somewhere in the neighbourhood of 25 to 50 percent of a loss or increase in crop yield in the area affected by soil heating.

It also stated that it has calculated the gas temperatures on all of the Fasts' lands and that because those lands are further downstream from the heat source, particularly on the Spirit River Lateral, the temperatures would be much cooler. On the Fasts' lands that are crossed by the Teepee Creek Lateral, Alliance calculated that the gas temperature would approximate the soil temperatures and that there would be virtually no heat effect.

The Company noted that, by increasing the depth of cover over the pipeline, the heat effects of the Alliance Pipeline could be reduced, but noted that with deeper burial there would be more spoil to deal with and the possibility of settling problems with the deeper trench. Alliance offered to discuss with Mr. Eggers methods of mitigating the potential impacts of soil heating which may arise on the Spirit River Lateral downstream of the Sexsmith Gas Plant.

Alliance has considered the potential for a cumulative effect from soil heating when paralleling the NOVA pipeline. The Company submitted that the most heat-affected zone is directly over the pipeline and this effect decreases rapidly, with there being little effect at 3 m from the centreline of the pipeline.

In Alliance's submission, this, together with the 20 m separation distance between the NOVA pipeline and the Spirit River Lateral, indicates that there will not be a synergistic heat effect.

Alliance stated that, in its view, the temperature of the gas that is tendered at the receipt point is not subject to its control and suggested that, even if this were a facilities hearing, the question of gas temperature would not be under the direct purview of the Board.

***Views of the Board***

The Board agrees with Alliance's position that the matter of controlling the gas temperature, being a design issue, is beyond the methods and timing of construction that can be addressed within the context of these detailed route hearings. This, however, does not mean that the matters of soil heating and gas temperature have been resolved to the Board's satisfaction.

During the hearing, it was not disputed that there could be heat effects associated with Alliance's proposed Spirit River Lateral. The Board accepts that the Alliance Pipeline may initially reduce the flow and hence the soil heating problem associated with the existing NOVA pipeline. However, in the Board's view, it is unrealistic, when assessing the potential effects, to assume that both the Alliance and NOVA pipelines would remain underutilized indefinitely. Further, the Alliance Pipeline may be connected to different sources in the future.

In the Comprehensive Study Report for the Alliance Pipeline Project ("CSR"), it was concluded that, based on the information provided during the certificate hearing, and with the implementation of the proposed mitigation measures and recommendations, the Alliance Pipeline is not likely to cause significant adverse environmental effects on soils. Alliance submitted that, within a year of reclamation of a cultivated field, in most cases there is no evidence of the pipeline.

The first opportunity to identify issues and propose corresponding design and operation solutions occurred during Alliance's initial consultations with landowners and in response to the Board's requirement for Early Public Notification ("EPN").[1] The source of the problem on the Eggers' land, namely soil heating, has only recently been acknowledged by NOVA, likely arising too late to have been captured by Alliance's EPN. However, during the certificate hearing, Alliance committed to continue to forward the results of ongoing consultations to the Board on a quarterly basis until such time that all concerns and comments were resolved. Alliance also stated that it would notify the Board of any new issues that might arise from its consultation. Accordingly, the Board expects that the matter of heat effects that are likely to result from the operation of the Spirit River Lateral, and the measures that would be taken by Alliance to address these effects for all affected landowners, are matters that will be pursued outside of this hearing pursuant to the commitments Alliance made to the Board. Since the Spirit River Lateral is not scheduled for construction until 2000, the Board expects that this consultation and issue resolution will occur prior to construction of the lateral.

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[1] The Board's requirements for Early Public Notification are set out in Part II of the *National Energy Board Guidelines for Filing Requirements*, dated 22 February 1995.

Further, Alliance is required to file post construction environmental reports within six months of placing each facility in operation and following the growing season for the first two complete growing seasons.[1] In the event that issues such as soil heating are identified in these reports, Alliance will be required to identify the measures that the Company proposes to address these matters.

In addition to the post-construction environmental reports, one of the conditions of Certificate GC-98 issued to Alliance sets out the requirements for a heat effects monitoring program.[2] During the certificate hearing, Alliance noted the need to review and update the monitoring program during the course of the program. Accordingly, the Board expects that situations where heat effects are likely to be identified, such as the Spirit River Lateral, will be incorporated into Alliance's heat effects monitoring program.

With respect to soil handling, the CSR states that, in the absence of measurable criteria for determining when to employ contingency measures in wet soil conditions, it is imperative to have a qualified soils expert on site when there is a potential to encounter wet soil conditions. The soils specialist should have a degree with a specialization in pedology, experience with the types of soils to be encountered, and be familiar with pipeline construction methods and the potential impacts of construction activities on wet soils. The soils specialist would have the authority to make decisions in the field, in consultation with the construction supervisor, regarding soils protection measures, including the decision to shut down construction.[3]

The evidence suggests that wet conditions are likely to be encountered in the areas of the Fasts' and Eggers' lands. Soil protection requires that appropriate decisions be taken when encountering wet conditions, and in determining when it is acceptable to replace the subsoil in the trench, whether the subsoil requires reworking prior to topsoil replacement, and when to replace the topsoil. To ensure that appropriate decisions are taken with respect to these issues, Alliance's soils expert should be on site to make these decisions for the Fasts' and Eggers' lands.

In the CSR, it was recognized that post-construction monitoring of the soil and crop conditions is essential to determine whether the mitigation and reclamation measures for soil were properly applied and effective. Further, in the event that Alliance's expectation that its line will have less impact than the existing NOVA pipeline is not fulfilled and mitigation is unsuccessful, Mr. Eggers and Mr. Fast may file a complaint with the Board.

The Board notes that Mr. Carter, when asked by the Board about potential conditions to an order approving the Alliance route, raised the matters of depth of burial and inspection of the pipeline but did not request that conditions be applied to address either

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1 For details of the post-construction environmental reports to be filed by Alliance, refer to Conditions 50 and 51 of Certificate GC-98. The text of all the conditions to Certificate GC-98 appear in Appendix V of the Board's Reasons for Decision dated November 1998 on the Alliance Pipeline Project.

2 For details of the heat effects monitoring program to be developed and implemented by Alliance, refer to Condition 53 of Certificate GC-98.

3 These provisions are set out in more detail in Condition 34 of Certificate GC-98.

of those issues. In his submission, increasing the depth of burial could result in having more spoil material to deal with and more settling problems. He also took the position that inspection would be outside of the Board's mandate in the detailed route hearing process.

Section 37 of the *NEB Act* authorizes the Board to impose such terms and conditions as it considers proper in any approval pursuant to section 36. Section 37 provides the Board with the discretion to impose conditions related to the construction methods and the specific inspection methods required to ensure construction is carried out in the manner prescribed.

Any order of the Board approving the plans, profiles, and books of reference for the Fasts' and Eggers' lands would require Alliance to ensure that its soils expert be on site to make all decisions related to soils handling during construction and reclamation activities associated with the Alliance Pipeline across the lands of Mr. Eggers and Mr. Fast. The Board is of the view that, with this condition, an independent soils expert should not be required for the Fasts' and Eggers' lands. In selecting the soils expert required by the Certificate and this condition, Alliance can factor in the concerns raised by the Fasts and Eggers.

The Board notes that Mr. Eggers was of the view that cooling of the gas carried by the pipeline was the only method of resolving the issue of soil heating by the pipeline, as a deeper burial of the pipeline could potentially lead to other soil problems. Nevertheless, further consultation between the landowners and Alliance may lead to construction methods that could reduce potential soil heating concerns in a manner which is agreeable to both the landowner and the Company. The Board encourages such consultations between the landowners and Alliance and would condition any order approving the plans, profiles, and books of reference for the Fasts' and Eggers' lands to require Alliance to file with the Board any methods of construction developed in consultation with the landowners in this case, to address potential soil heating effects and to provide an estimate of the residual heat effect on the subject lands.

#### 3.3.4.6 Engineering and Safety Matters

No site-specific engineering or safety matters were raised by either the Fast or the Eggers.

#### 3.3.4.7 30 m Safety Zone

*The Fasts*

Mr. Fast said that he understands there is a safety zone that parallels the right-of-way for 30 m on either side, and that he is concerned as to the limits of what he could do in that zone. He submitted that the 18 m right-of-way is turning into 78 m and asked whether there would be compensation for the extra 60 m.

***Views of the Board***

Section 112 of the *NEB Act* and the *National Energy Board Pipeline Crossing Regulations* made under that section establish a 30 m safety zone on either side of the

right-of-way.[1] This legislation regulates certain activities in the vicinity of the pipeline which could pose a threat to safety, and is not intended to place any other limitations on the use of the land adjacent to the right-of-way.

Anyone intending to excavate using power-operated equipment or explosives for any purpose within the safety zone must first obtain permission from the Company. In most cases, this permission would be granted once the Company has identified the precise location of the pipeline. Should the Company refuse, application may be made to the Board for permission.

### 3.3.4.8 Compensation

During the hearing, the matter of compensation was raised by the parties.

***Views of the Board***

As the Board stated in its Directions on Procedure for these hearings, it has no authority to settle compensation matters. The Board reminds parties that, for resolution of compensation disputes, they have the right under the *NEB Act* to apply to the Minister of Natural Resources Canada for negotiation or binding arbitration.[3]

**Decision**

**Having considered all of the evidence, the Board finds that the route proposed by Alliance over the lands of the Fasts and the Eggers is the best possible detailed route for the pipeline, and further finds that Alliance has committed to the most appropriate methods and timing of construction, subject to compliance with the following conditions:**

1. **Alliance shall use its best efforts to consult with the Fasts and the Eggers for the purpose of developing a mutually acceptable plan, regarding construction methods, to address potential soil heating effects of the Spirit River Lateral.**

2. **Alliance shall, prior to construction, file with the Board and the landowners in this case:**

   **(a) the results of its consultation with the Fasts and the Eggers;**

   **(b) an estimate of the residual heat effects of the pipeline on both the Fasts' and Eggers' lands;**

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1 Subsection 112(1) of the *NEB Act* states as follows: *"Subject to subsection (5), no person shall, unless leave is first obtained from the Board, construct a facility across, on, along or under a pipeline or excavate using power-operated equipment or explosives within thirty metres of a pipeline."* The *National Energy Board Pipeline Crossing Regulations* were made under subsection (5) and govern in more detail excavation activities in the vicinity of a pipeline.

**(c) an assessment of the impacts of the residual heat effects; and**

**(d) any revisions to the construction methods, to which the respective landowners have consented, that would address those impacts.**

**3. Alliance shall ensure that its soils expert is present on site to make all decisions related to soil handling activities during construction and reclamation on the Fasts' and Eggers' lands.**

**The foregoing constitutes our Decisions and Reasons for Decisions in respect of the objections of Don & Linda Liland, Franklin & Joan Moller, Brian & Teresa Fast, and Peter & Levke Eggers.**

| R.J. Harrison | D. Valiela | J.S. Bulger |
|---|---|---|
| Presiding Member | Member | Member |

Calgary, Alberta
Dated 29 July 1999

## 3.4 Decision on Route Objection by Bryan Ellingson Heard by the Board on 2 June 1999 in Grande Prairie, Alberta

### 3.4.1 Introduction and Background

On 3 December 1998, the National Energy Board ("Board") issued a certificate of public convenience and necessity approving the construction and operation of the Alliance Pipeline Project in Canada. This followed a 77-day public hearing and a comprehensive study on potential environmental effects. The Board also approved the general route of the pipeline at that time.

Alliance Pipeline Ltd. ("Alliance" or "the Company") subsequently applied to the Board for approval of plans showing the proposed detailed route of the pipeline in Canada. As required by section 34 of the *National Energy Board Act* ("*NEB Act*"), Alliance served notices on owners of lands that it proposed to acquire, and published notices in publications serving the areas in which the lands are situated. Landowners and other interested persons opposing the detailed routing of the Alliance Pipeline were given 30 days to file a written statement of opposition with the Board.

The Board is conducting public hearings in response to the route objections. As prescribed by section 36 of the *NEB Act*, the issues for the detailed route hearings are limited to (i) the best possible detailed route of the pipeline and (ii) the most appropriate methods and timing of constructing the pipeline. The Board is not reconsidering issues that were addressed during the certificate hearing, such as the need for the pipeline and its general route. Compensation for land use is also outside the scope of the detailed route hearings.

This decision pertains to the statement of opposition that was filed on 18 January 1999 by Mr. Bryan Ellingson. The hearing into the route objection was held on 2 June 1999 in Grande Prairie, Alberta, with

Mr. Ellingson and Alliance participating.[1] Mr. Ellingson was represented by Mr. J. Darryl Carter, Q.C., of the law firm of Carter, Lock & Horrigan. Alliance was represented by Mr. Alex Ross and Mr. Richard Neufeld of the law firm of Fraser Milner.

Alliance plans to construct and operate the Canadian portion of a natural gas pipeline system from northeastern British Columbia and northwestern Alberta, across Saskatchewan, to the midwest United States. The Canadian portion of the system will consist of approximately 2300 kilometres ("km") of pipeline ranging up to 1067 millimetres ("mm") in diameter and other facilities, including seven mainline compressor stations. Construction of the 610 mm diameter Fort St. John Lateral across Mr. Ellingson's land is scheduled for the October/November 1999 time frame. The Alliance Pipeline is scheduled to be in service in the second half of 2000.

### 3.4.2 Proposed Detailed Route

The proposed Fort St. John Lateral route runs in a southeasterly direction, diagonally crossing the top half of SE 32-79-12 W6M between Kilometre Posts ("KPs") 9.4 and 8.6.[2,3] Mr. Ellingson's land is approximately 96 km northwest of Grande Prairie and 58 km west of the Town of Spirit River. The proposed route would cross Highway No. 719 immediately to the east of SE 32-79-12 W6M.

### 3.4.3 Alliance Routing Rationale

Mr. Ellingson's land is located approximately 16 km upstream of the proposed mainline tie-in location. Upstream from this tie-in location, the Fort St. John Lateral heads toward the existing Westcoast Energy Inc. ("Westcoast") and Federated Pipe Lines Ltd. ("Federated") rights-of-way which it then parallels from KP 17.5 approximately 30 km further upstream to the Kiskatinaw River crossing.

The Pouce Coupe River crossing is located approximately 8 km upstream of the Ellingson lands. Alliance submitted that the Pouce Coupe River Valley is very deeply incised and that the crossing represents a significant control point. Alliance indicated that the preferred location to cross the Pouce Coupe River Valley is in the same location as the Westcoast and Federated rights-of-way.

From this point travelling east towards the mainline tie-in, Alliance stated that it needed to deflect from the Westcoast right-of-way at a logical spot so as to avoid the Saddle Hills, which it described as an environmentally significant area.

Alliance indicated that, in reviewing the route and in flying the area, it became apparent that the point of deflection from the Westcoast and Federated rights-of-way should be at the top of the east slope of the Pouce Coupe River Valley so as to avoid a large coulee about 2 km to the east at approximately KP 15.5 and Westcoast compression facilities less than 2 km further to the east (at approximately KP 13.7).

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1 The hearing record includes a map showing Mr. Ellingson's land in relation to Alliance's proposed detailed route and the alternate route suggested by Mr. Ellingson (Drawing No. AP-9950-2964, Revision 3, filed as part of Exhibit B-18).

2 In addition to SE 32-79-12 W6M, Mr. Ellingson owns NE 32-79-12 W6M and NW 28-79-12 W6M.

3 The KPs are measured opposite to the flow direction from the point at which the Fort St. John Lateral starts to parallel the Gordondale West Lateral, which coincides with the originally planned location for the commencement of the 1067 mm diameter mainline. That point of commencement for the mainline was later shifted about 7 km to the east.

Alliance indicated that there is a north-south road which intersects the coulee at the same place as the Westcoast and Federated rights-of-way, and that this was not considered to be a good location for a road crossing by its pipeline.

Alliance indicated that its proposed detailed route in the vicinity of Mr. Ellingson's lands is a very direct route on very level, flat agricultural lands. Alliance also stated that it preferred to stay north of Henderson Creek in this area.

### 3.4.4 Nature of Objection

In his statement of opposition, Mr. Ellingson opposed the proposed routing because the alignment would cut directly through his property, which he submitted would have an unnecessary detrimental impact on the present and future use of his land. During the hearing, Mr. Ellingson explained that his refusal to sign an easement with Alliance stemmed from problems that he had experienced with respect to the installation of a pipeline across his lands in 1997 by ANG Gathering and Processing Ltd. ("ANG"), and specifically with regard to compensation for relocation of his horses during construction and right-of-way reclamation.

### 3.4.5 Alternate Routes

Mr. Ellingson proposed two alternate routes. The first alternate would run in an easterly direction, following the south boundary of SE 32-79-12 W6M and the north boundary of NW 28-79-12 W6M. The second alternate would parallel Westcoast to the south and west of his lands.

Mr. Ellingson submitted that the first alternate would cause a lot less problems to his farming operation and save him the hassle of having to deal with Alliance on the relocation of his horses during construction. The second alternate would take Alliance's Fort St. John Lateral off his lands altogether.

The first proposed alternate route did not extend to connect to the proposed Alliance detailed route. Alliance indicated that, for comparison purposes, it was necessary to find a way to reconnect the alternate route with the existing Alliance route beyond Mr. Ellingson's lands. Alliance first plotted the partial alternate, as submitted by Mr. Ellingson, and subsequently plotted extensions.

In its opening statement, Alliance presented its comparison of the Company's proposed route and the extension of Mr. Ellingson's first alternate route. This comparison is reproduced as Table 3-5. No comparison table was provided in respect of Mr. Ellingson's second alternate.

**Table 3-5**
**Comparison of Routing Considerations Between the Proposed Alliance Route and the Suggested Landowner Route***

**Landowner:** **Bryan Ellingson**
**Legal Locations:** **SE 32-79-12 W6M**
**Pipeline Segment:** **Fort St. John Lateral - Alberta (KP 6.3 to KP 10.25)**

| Routing Considerations | Alliance Route | Objector Route |
|---|---|---|
| Length (km) | 4.04 | 4.23 |
| Length following existing pipelines (m) | 0 | 0 |
| Foreign pipeline crossings | 1 | 1 |
| Road crossings | 1 highway | 1 highway, 2 access trails |
| Railroad crossings | 0 | 0 |
| Watercourse crossings | 0 | 0 |
| Clearing required (m, approximate) | 30 | 30 |
| Wet terrain | Nil | Nil |
| Other notes | Nil | residence within 50 m of route; Alliance Pouce Coupe Lateral extended by approximately 50 m; granary and abandoned buildings in NE 28. |
| Affected parcels of land | 5 | 7 |
| • new parcels | N/A | 4 |
| Residences within 250 m | 1 | 2 |
| Points of Intersection (PI's) | 0 | 7 |
| Estimated cost to construct** | $2,747,200 | $2,876,400 |
| Incremental cost | N/A | $129,200 |

* First alternate route as extended by Alliance

** Alliance's cost figures appearing in the table are based on the Company's estimated cost of construction for the Fort St. John Lateral of approximately $680 per metre, excluding land acquisition costs.

### 3.4.6 Environmental and Land Use Matters

*Landowner Concerns with Past Construction and Mitigation Measures*

Mr. Ellingson stated that he had experienced a contractual dispute with ANG over the compensation to be paid for the relocation of his horses during the construction of a pipeline by that company across his lands in 1997.[1] This dispute was cited as his reason for wanting the Alliance route diverted down the property line rather than across the quarter-section.

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[1] The ANG pipeline was constructed in the northeast quadrant of the SE¼ of Section 32 to tie in a well site. This location is to the north of Alliance's proposed route through this quarter-section.

Mr. Ellingson also noted that he had experienced problems with respect to the actual construction and reclamation of the ANG project on his lands. More particularly, his experience during construction of the ANG pipeline was that the topsoil stripped was graded and used as a road with traffic continuing in the rain and mud. Mr. Ellingson submitted that reclamation was never completed and the right-of-way, though level, is like a cement road as a result of compaction, with next to nothing for topsoil. He further observed that the right-of-way was not re-seeded. Based on this experience, Mr. Ellingson was concerned that topsoil be piled on the side and not graded down for a road, and that the topsoil not be stripped under wet conditions. Mr. Ellingson also raised a concern that Alliance appropriately cut and repair fences.

Mr. Ellingson stated that, following his bad experience with ANG, he would not negotiate or reach any agreement directly with Alliance. He went on to say, however, that Mr. Carter (as his counsel) could negotiate on his behalf.

With respect to his herd of horses that are pastured on the land that would be traversed by the proposed detailed route of the Alliance Pipeline, Mr. Ellingson noted that he does not want his horses in the area with an open ditch. He further noted problems with gates not being shut. In light of these concerns, Mr. Ellingson noted that his preference would be to relocate his horses during construction to the field directly west of his residence. However, he would incur additional costs in relocating his horses and providing feed at this location and, as such, would require compensation.

Alliance emphasized that, at this time, it is committed to appropriately addressing the construction impacts that Mr. Ellingson would be expected to face. In argument, Alliance indicated that its commitments to Mr. Ellingson in that regard stand, and that the Company would not object to the mitigation measures which have been suggested by Mr. Ellingson as appropriate, such as relocating his horses to the pasture just to the west of his residence on his property.

Alliance noted that the Comprehensive Study Report ("CSR") prepared in respect of the Alliance Project dealt specifically with soils impacts and the associated mitigative measures for mixing, erosion, compaction, and rutting. Alliance went on to submit that these mitigative measures, together with the recommendations contained in the CSR, subsequently became Condition 34 to Certificate GC-98 and should address the concerns of Mr. Ellingson in that respect.[1] Alliance also noted that these matters have been the subject of extensive investigation and analysis by Alliance in terms of soil typing, soil type mapping on the route, and determining locations of specific soil concerns and soil features which would lead to concern or would require specific mitigative measures over and above those generally proposed. Alliance further referred Mr. Ellingson to the detailed plans and handling procedures included in the Environmental Plans provided to landowners as part of the Company's evidence for the detailed route hearings.

Alliance noted that it intends to consult Mr. Ellingson to determine the choice of seed mix to be replanted along the right-of-way.

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1 Reference section 4.4 "Soils" of the CSR for the Alliance Pipeline Project dated September 1998 and Condition 34 of Certificate GC-98, the text of which appears in Appendix V of the Board's GH-3-97 Reasons for Decision dated November 1998.

*Routing Considerations*

Mr. Ellingson submitted that his first alternate route, which would have Alliance construct near the boundaries of two of his quarter-sections, would cause a lot less problems to his farming operation. He added that Alliance would save about $129,000 at his expense if the alternate were not taken, and submitted that taking the alternate along the property lines would be the ultimate mitigation.

Alliance indicated that it has not been a routing criterion to follow property boundaries. Alliance also indicated that incorporating and rigidly following such a criterion would have added enormously to the length of the project, with consequent increases in surface disturbance, environmental impact, and capital cost. Alliance also submitted that following property boundaries would conflict with existing and future development.

Alliance also considers the first alternate route to be inferior to its proposed route due to the unnecessary proximity of the route to the residence in the southwest corner of the SW¼ of Section 33, the fact that the pipeline would have to cross Highway No. 719 in a location where the highway bends and was constructed using a significant cut into a coulee of Henderson Creek, and the incremental pipeline length and associated capital cost required.

With respect to the second alternate, Alliance submitted that environmental considerations factored into the decision not to follow the Westcoast right-of-way to the south of Mr. Ellingson's lands. More specifically, Alliance submitted that Westcoast crosses Henderson Creek in a much deeper area at that location relative to its proposed crossing site about 20 km to the east, where the creek is smaller. Accordingly, Alliance submitted that crossing Henderson Creek on the Westcoast route would be more environmentally significant. Also, as previously mentioned, Alliance stated that it needed to deflect from the Westcoast right-of-way at a logical spot so as to avoid the Saddle Hills. Alliance also submitted that this alternate would add a fair amount of length in comparison to its proposed route.

It was noted by Mr. Ellingson that re-joining the Westcoast right-of-way after avoiding the features to the east of the Pouce Coupe River Valley (per Mr. Ellingson's second alternate) would be in keeping with Alliance's routing criterion to follow existing rights-of-way. Alliance responded that the Company is not married to that as a primary routing criterion, and that there is no point in following an existing pipeline if it is not a good spot to put the new pipe.

Alliance urged the Board not to solve a problem regarding a dispute with another pipeline company and a concern with potential inconvenience on a farming operation, by moving the pipeline or suggesting it be moved in a manner which no landowner has indicated they might prefer, particularly considering that the landowner's proposed mitigation option is acceptable to the Company.

*Soil Heating*

During the hearing, Mr. Ellingson also enquired as to how much ground heat the pipeline would produce. Mr. Ellingson was referred to Alliance to obtain further information on this matter, and it was indicated by Alliance counsel that he need have no concern with respect to this issue on the lateral to be constructed on his lands.

*Views of the Board*

Although the Board does not regulate the specific ANG pipeline in question, the Board is sympathetic to the experience Mr. Ellingson has endured. In this context, the Board's responsibility is to ensure that such a situation does not occur with respect to the Alliance Pipeline. The Board accepts Alliance's commitment to address the short-term impacts associated with construction and its commitment to carry out the mitigations that had been suggested by Mr. Ellingson.

Any order of the Board approving the plans, profiles, and books of reference for the subject lands would include a condition requiring Alliance to fulfill all of the commitments made by Alliance to Mr. Ellingson in the course of this detailed route proceeding. Mr. Ellingson would be entitled to seek a remedy from the Board if any of the commitments were not fulfilled.

The Board notes that, other than the matter of relocating Mr. Ellingson's herd of horses during construction which Alliance has agreed to, matters raised pertaining to soils handling, including restrictions on construction during wet conditions, have been previously addressed in the CSR and Certificate GC-98 for the Alliance Pipeline Project issued by the Board.

Other than the above-noted matters, no further issues pertaining to the timing or method of construction were identified. The Board observes that no environmental considerations have been identified that would favour the alternates suggested by Mr. Ellingson over the proposed detailed route. Accordingly, the Board is of the view that, in these circumstances, it would be reasonable to select a route that minimizes overall disturbance.

### 3.4.7 Engineering and Safety Matters

Mr. Ellingson did not raise any engineering and safety issues with respect to Alliance's Fort St. John Lateral.

As noted earlier, Alliance cited what it characterized as the "unnecessary proximity to the residence in the southwest corner of the SW of Section 33" as a factor against Mr. Ellingson's first alternate route. Alliance indicated in its written evidence that the alignment submitted by Mr. Ellingson measured approximately 50 m to the south of the residence, and clarified during the hearing that the separation might have to be somewhat greater given the need to offset the pipeline from the county road. [1]

In its written evidence, Alliance had specified the avoidance of residences as one of its routing criteria. [2]

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1 Alliance submitted that there is generally a 30 m offset provided for in county bylaws for situations where a pipeline is to run parallel to a county road.

2 Alliance's routing criteria is set out in section 4.2 (and more specifically, on page 26) of the CSR. A copy of this section was provided by Alliance as part of its written evidence for the detailed route proceeding.

*Views of the Board*

The Board considers the avoidance of residences to be a valid routing criterion.

### 3.4.8 Costs

As indicated by Table 3-5, Alliance estimated the incremental cost of Mr. Ellingson's first alternate route to be $129,200. Alliance confirmed during cross-examination that this figure had been calculated on the basis of the 190 m incremental length that would be required.

In response to an undertaking provided to the Board, Alliance confirmed that its estimated cost of construction for the Fort St. John Lateral is approximately $680 per metre, excluding land acquisition costs. Alliance provided the following unit cost breakdown: (i) $179 for pipe and coating; (ii) $7 for other materials (valves, etc.), (iii) $414 for pipeline construction (summer); (iv) $35 for third party (survey, inspection, etc.); (v) $23 for engineering and construction management; and (vi) $21 for contingency. Alliance indicated that all of these costs include an allowance for funds used during construction. Land acquisition costs were estimated by Alliance to be $21 per metre.

Alliance clarified during the hearing that this $129,200 incremental cost does not include the additional cost for the 50 m extension of the 168 mm diameter Pouce Coupe Lateral that would be required by Mr. Ellingson's alternate route. That additional cost was estimated by Alliance to be in the $150 to $175 per metre range, or $7,500 to $8,750 for the extension.

Neither of the hearing participants specifically addressed the issue of incremental cost in argument.

*Views of the Board*

In the Board's view, incremental cost is a valid routing consideration which has to be weighed against other factors, including landowner concerns, in determining the best possible route. The Board finds, in this case, that the incremental cost of Mr. Ellingson's first alternate route would be significant.

**Decision**

**Having considered all of the environmental and land use, engineering and safety, and cost matters described above, the Board finds, on balance, that the route proposed by Alliance is the best possible detailed route for the pipeline in this case and finds that Alliance has committed to the most appropriate methods and timing of construction.**

**Any order of the Board approving the plans, profiles, and books of reference for the subject lands will include a condition requiring Alliance to fulfill all of the commitments made by the Company in the course of this detailed route proceeding. Mr. Ellingson is entitled to seek a remedy from the Board if any of the commitments are not being fulfilled.**

**If a commitment cannot be fulfilled at any time, Alliance will be required to provide to the Board, and to Mr. Ellingson, a written explanation as to why the commitment cannot be fulfilled together with a description of the measures that the Company proposes to otherwise take to address the concerns of Mr. Ellingson. If dissatisfied with the explanation and/or the alternate measures being proposed, Mr. Ellingson may file a complaint with the Board and seek an appropriate remedy.**

| R.J. Harrison | D. Valiela | J.S. Bulger |
|---|---|---|
| Presiding Member | Member | Member |

Calgary, Alberta
Dated 20 July 1999